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**Honeycutt**

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(54) **MAGNETIC EARPHONES HOLDER**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(22) Filed: **Aug. 22, 2017**

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US 2017/0353782 A1 Dec. 7, 2017

**Related U.S. Application Data**

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(51) **Int. Cl.**  
**H04R 1/10** (2006.01)  
**H04R 1/02** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **H04R 1/1041** (2013.01); **H04R 1/028** (2013.01); **H04R 1/1016** (2013.01); **H04R 1/1033** (2013.01); **H04R 2201/023** (2013.01)

(58) **Field of Classification Search**  
CPC H04R 1/1041; H04R 2460/05; H04R 1/1033; H04R 2420/01

See application file for complete search history.

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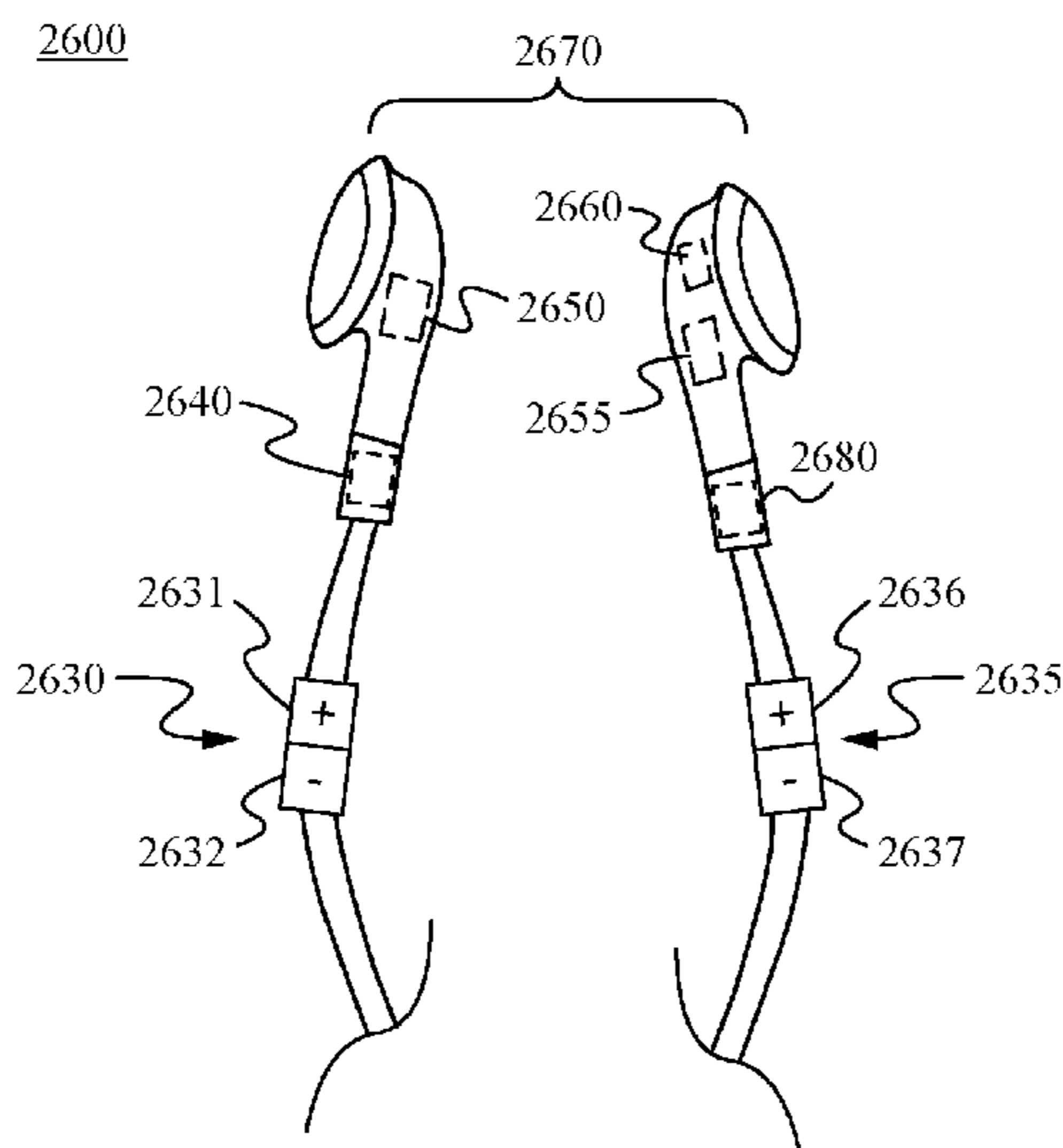
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(74) *Attorney, Agent, or Firm* — Haverstock & Owens LLP

(57) **ABSTRACT**

A set of headphones and audio system comprises a first set of buttons for controlling a volume level of transmitted audio to the headphones and a second set of buttons for controlling a volume level of external audio played by the headphones. The transmitted audio comprises audio received from an audio source such as an electronic device and the external audio comprises surrounding ambient noise received by a microphone coupled to the headphones. With the first set of controls and the second set of controls a user is able to adjust the volume level of the transmitted audio and the volume level of the external audio in order to listen to the transmitted audio while still interacting with the surrounding environment.

**49 Claims, 24 Drawing Sheets**



**Related U.S. Application Data**

filed on Jul. 13, 2012, provisional application No. 61/712,136, filed on Oct. 10, 2012.

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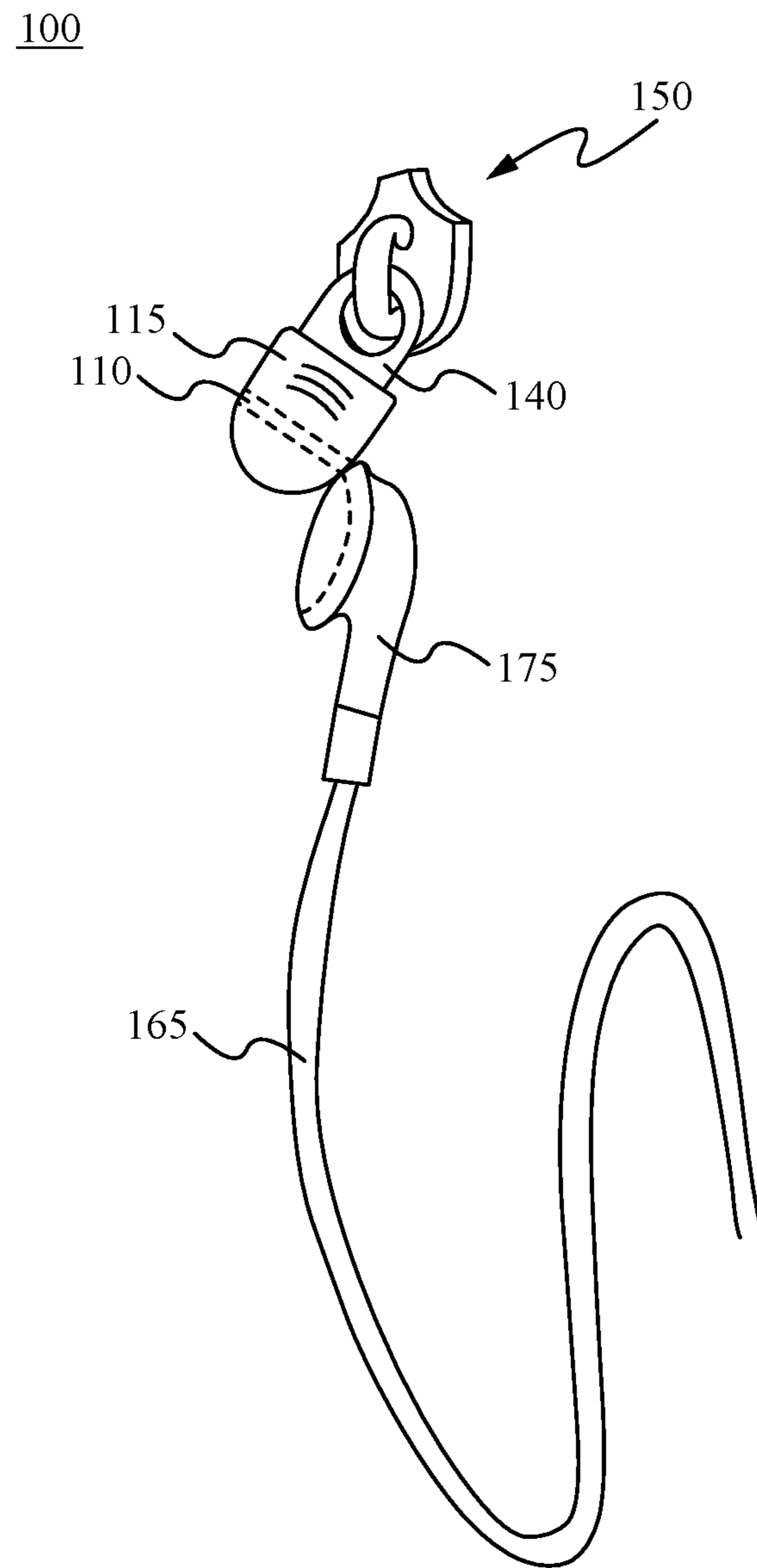
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**Fig. 1**

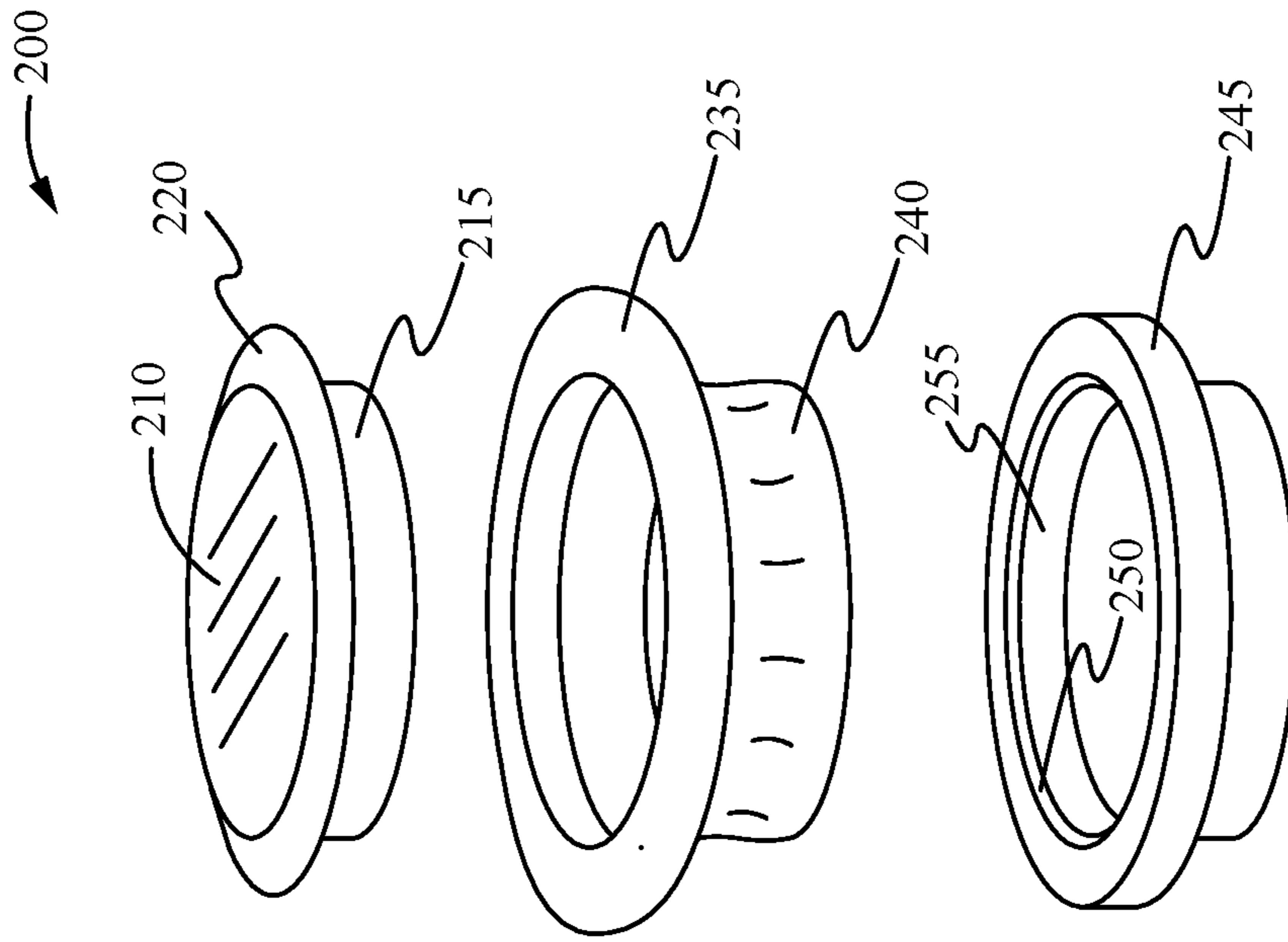


Fig. 2B

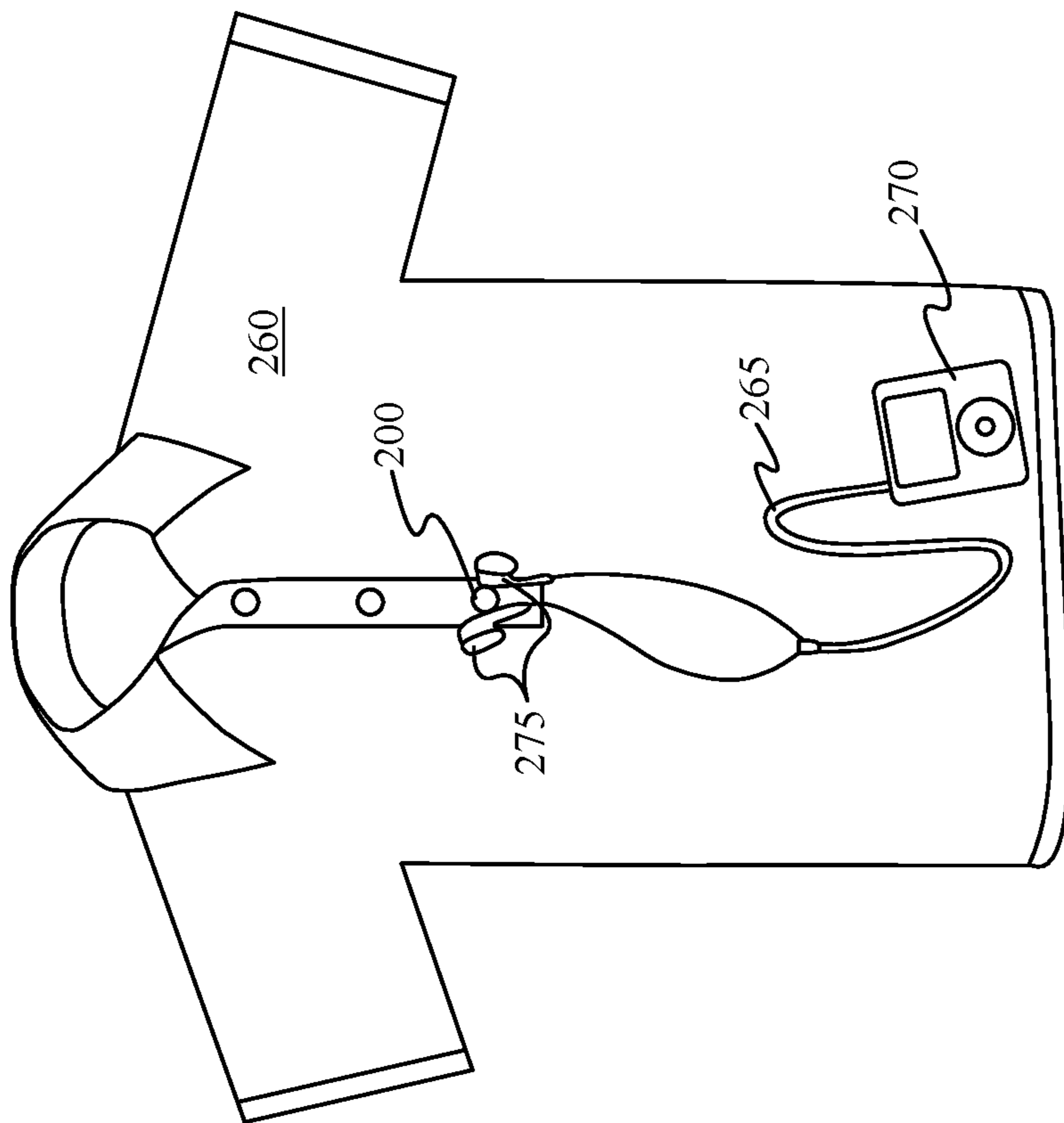


Fig. 2A

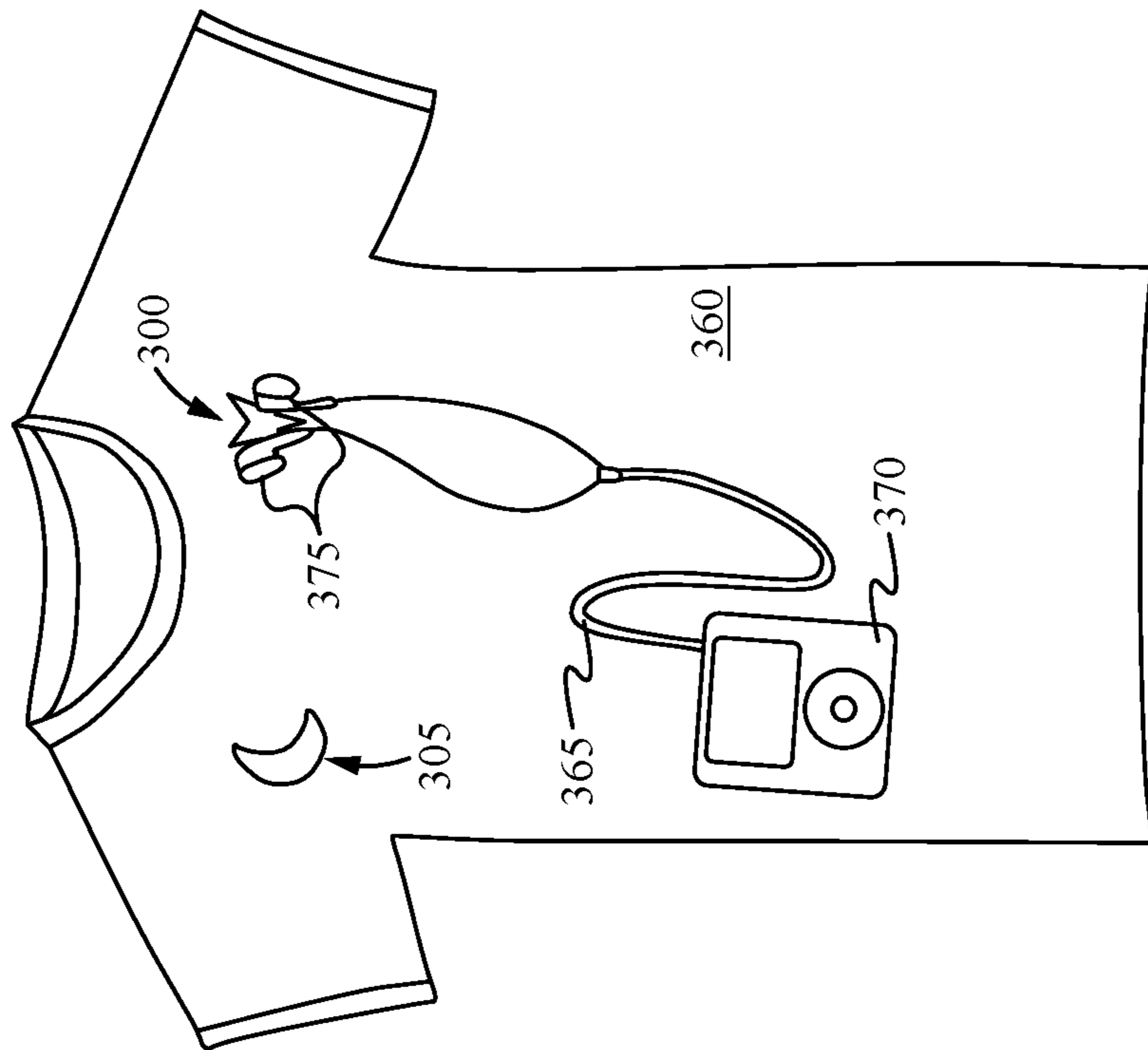
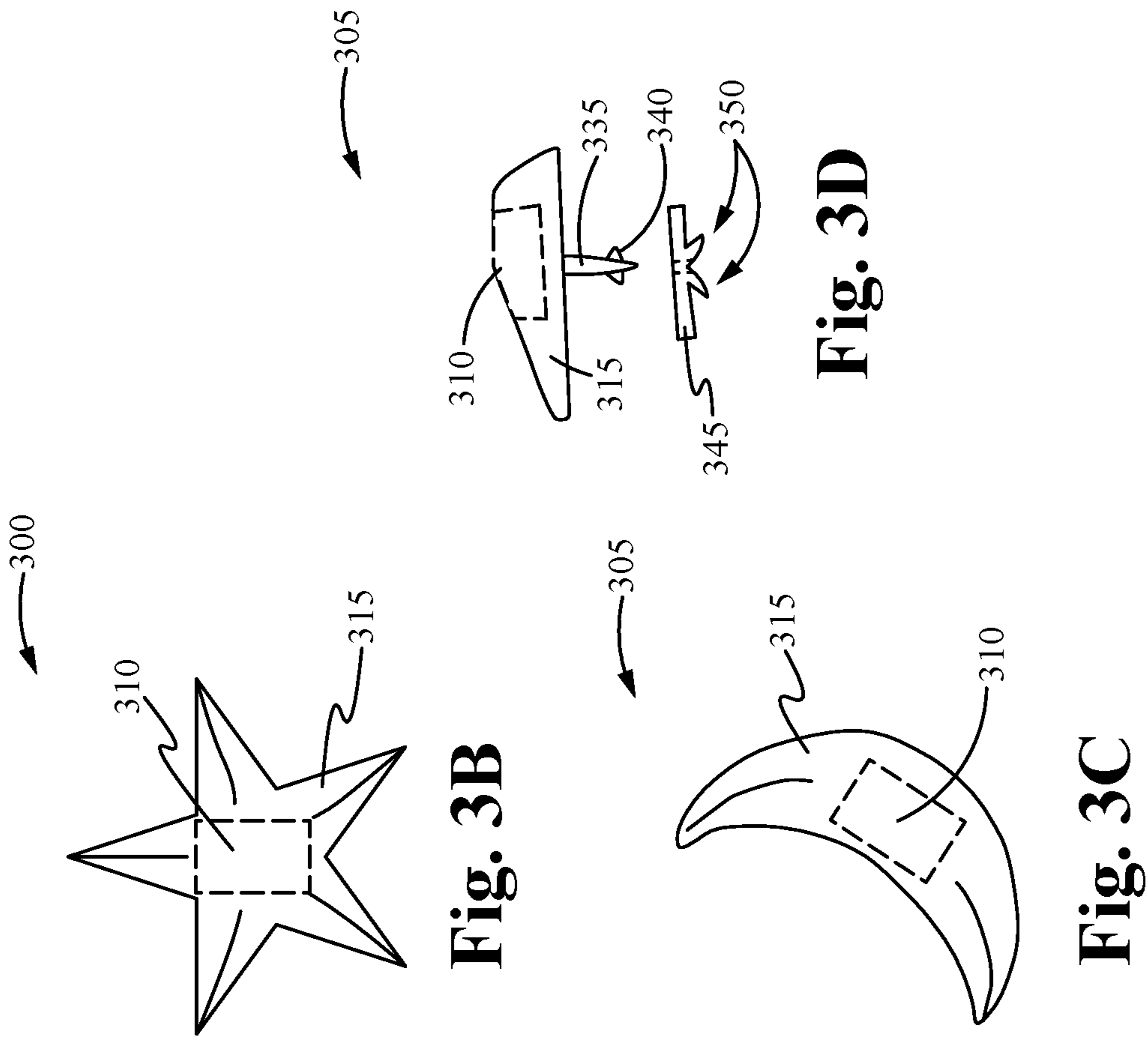


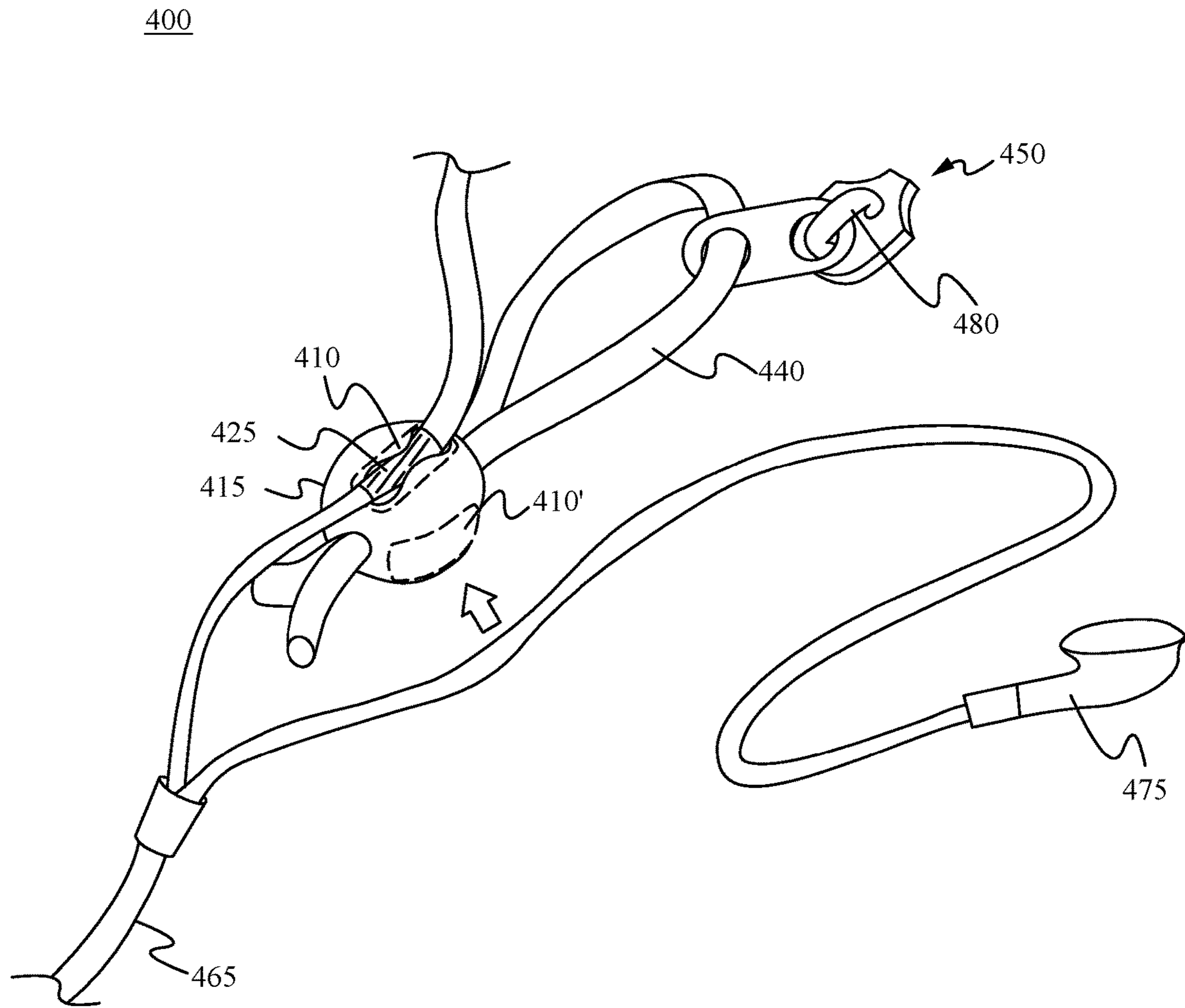
Fig. 3A

Fig. 3B

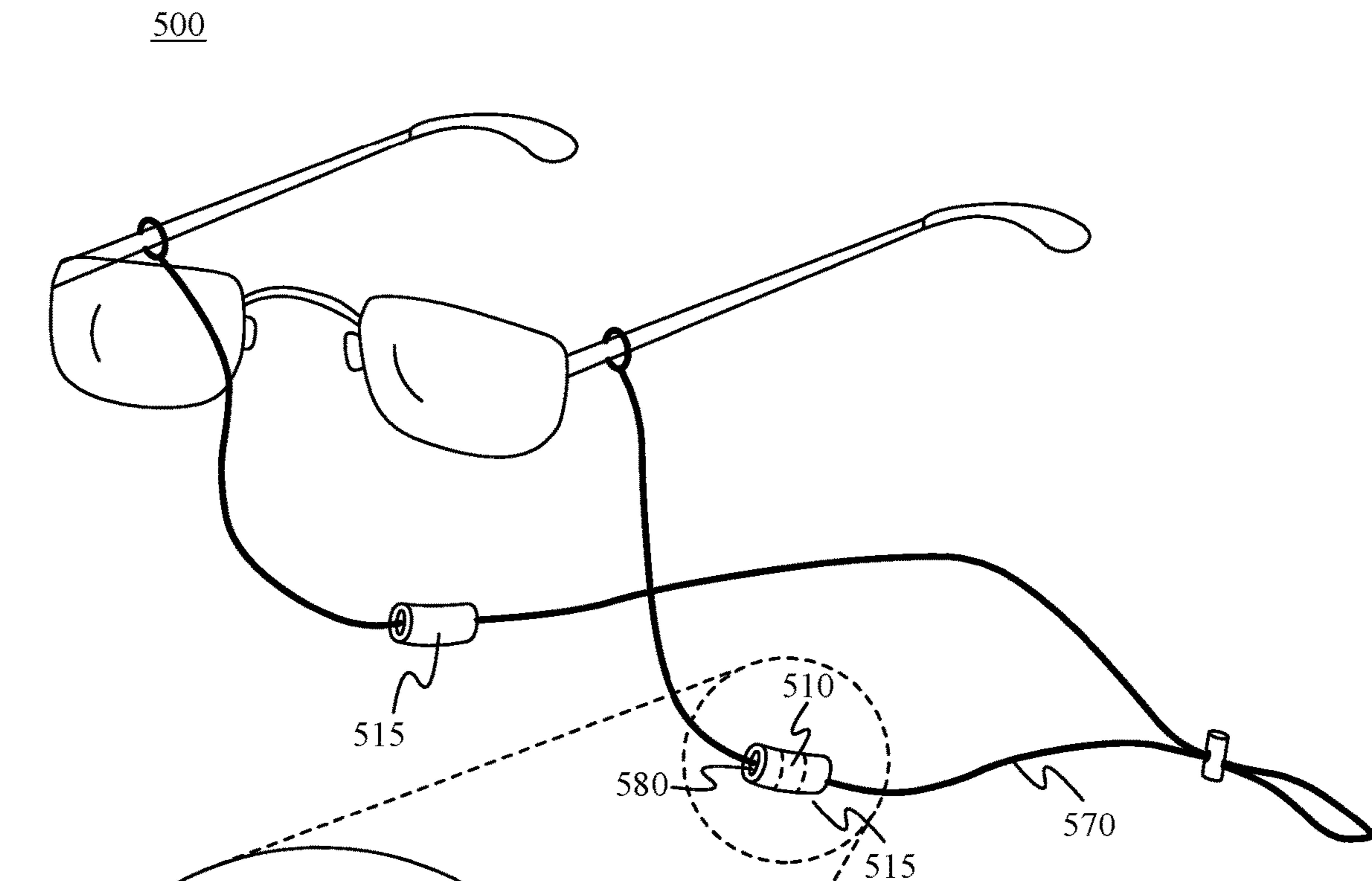
Fig. 3C

Fig. 3D

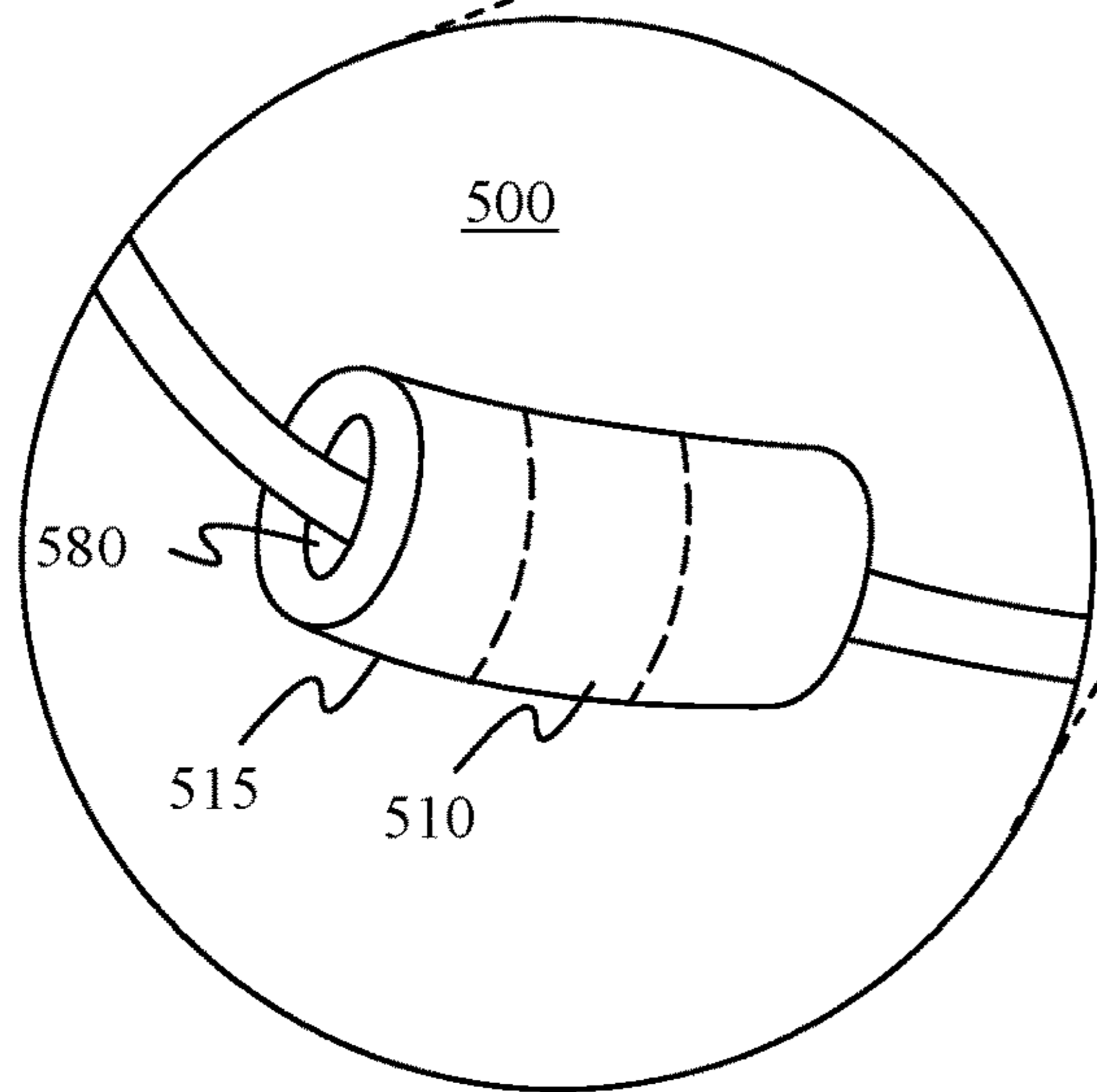




**Fig. 4**



**Fig. 5A**

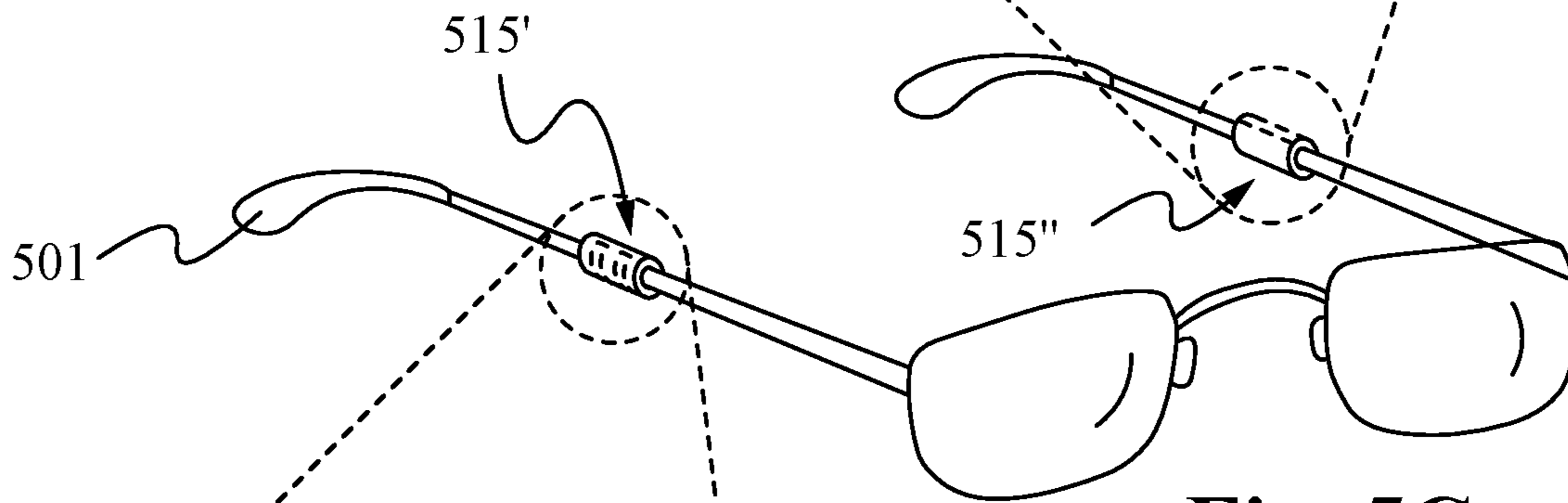
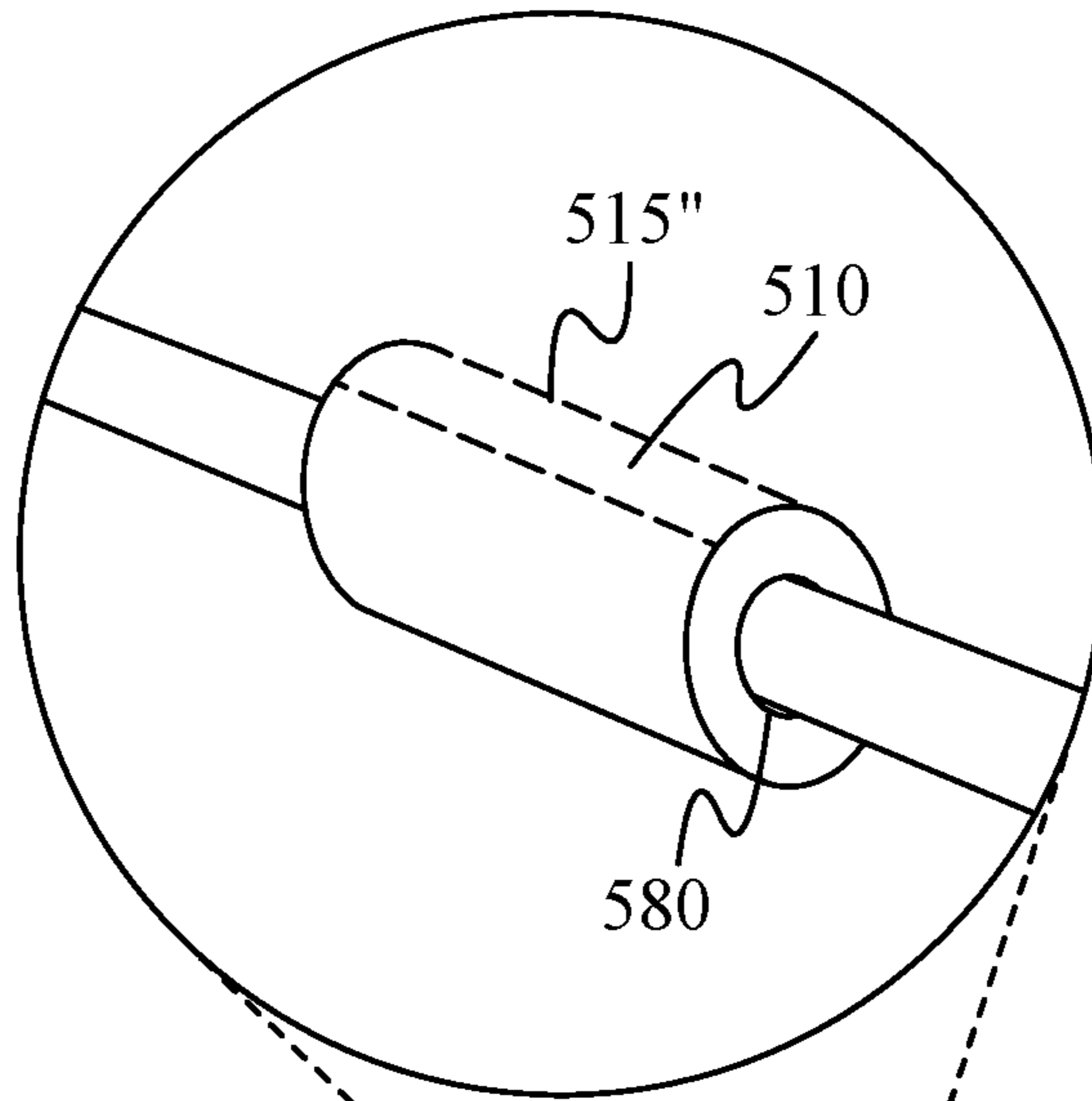


**Fig. 5B**

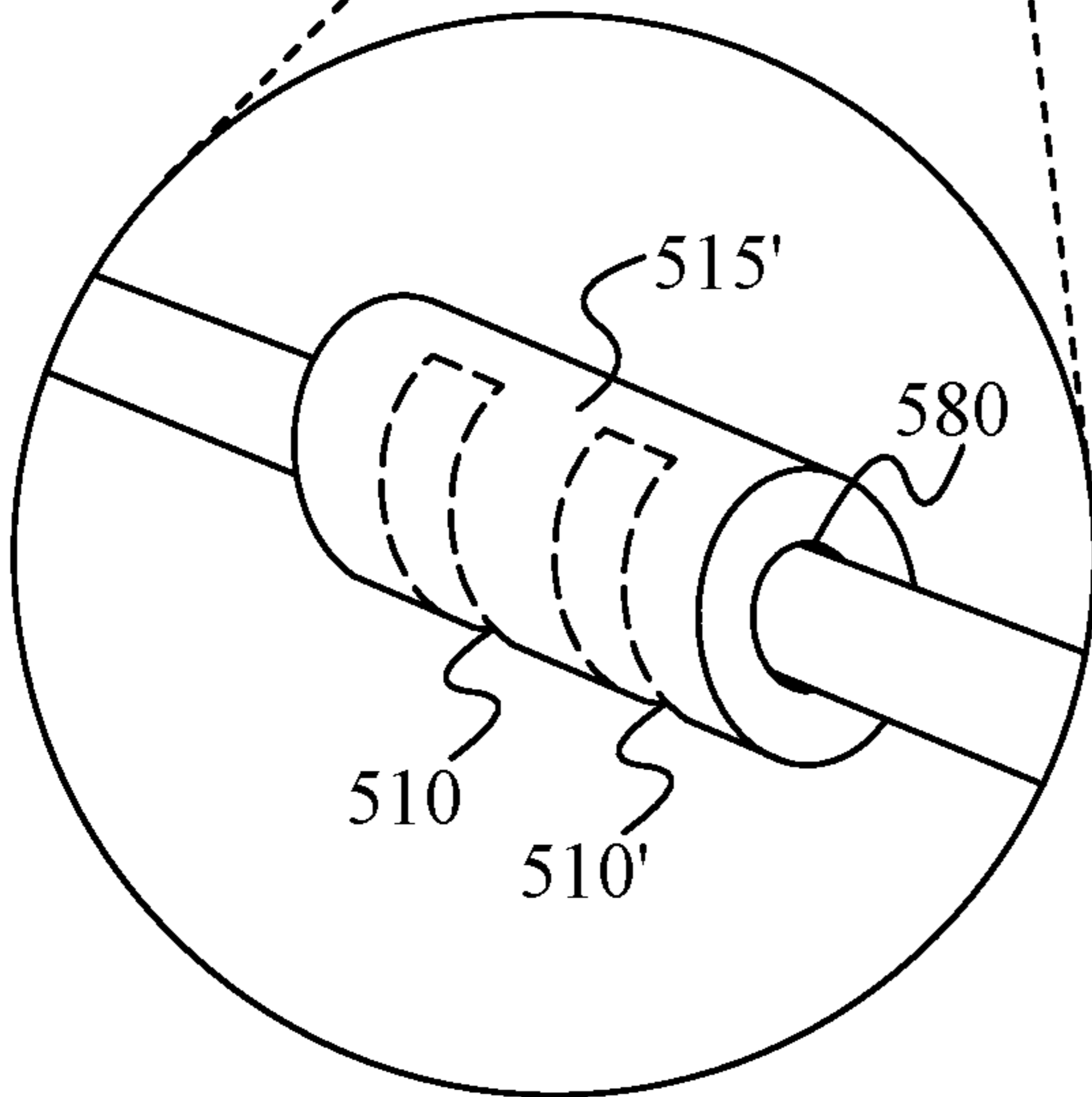


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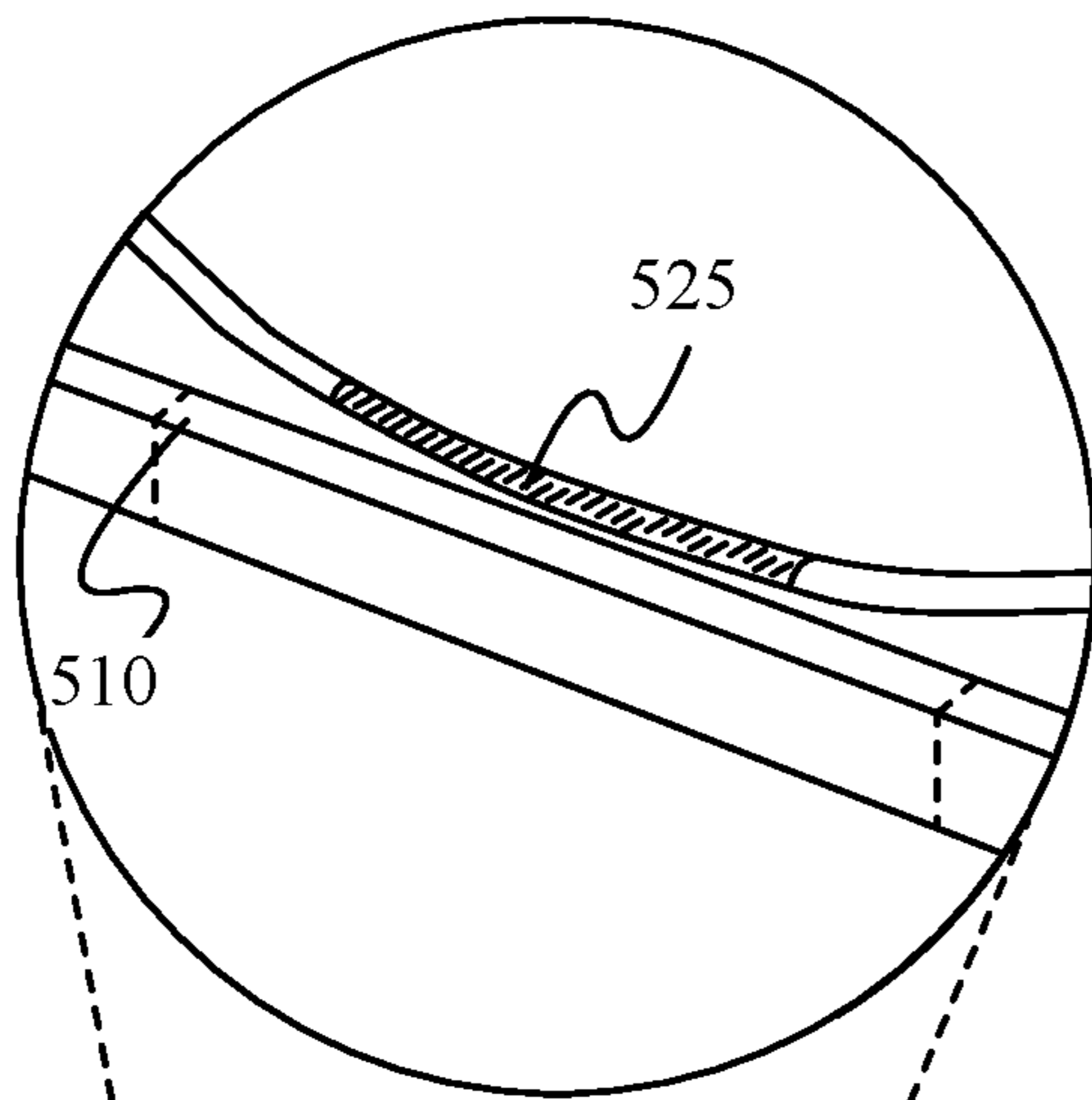
**Fig. 5E**



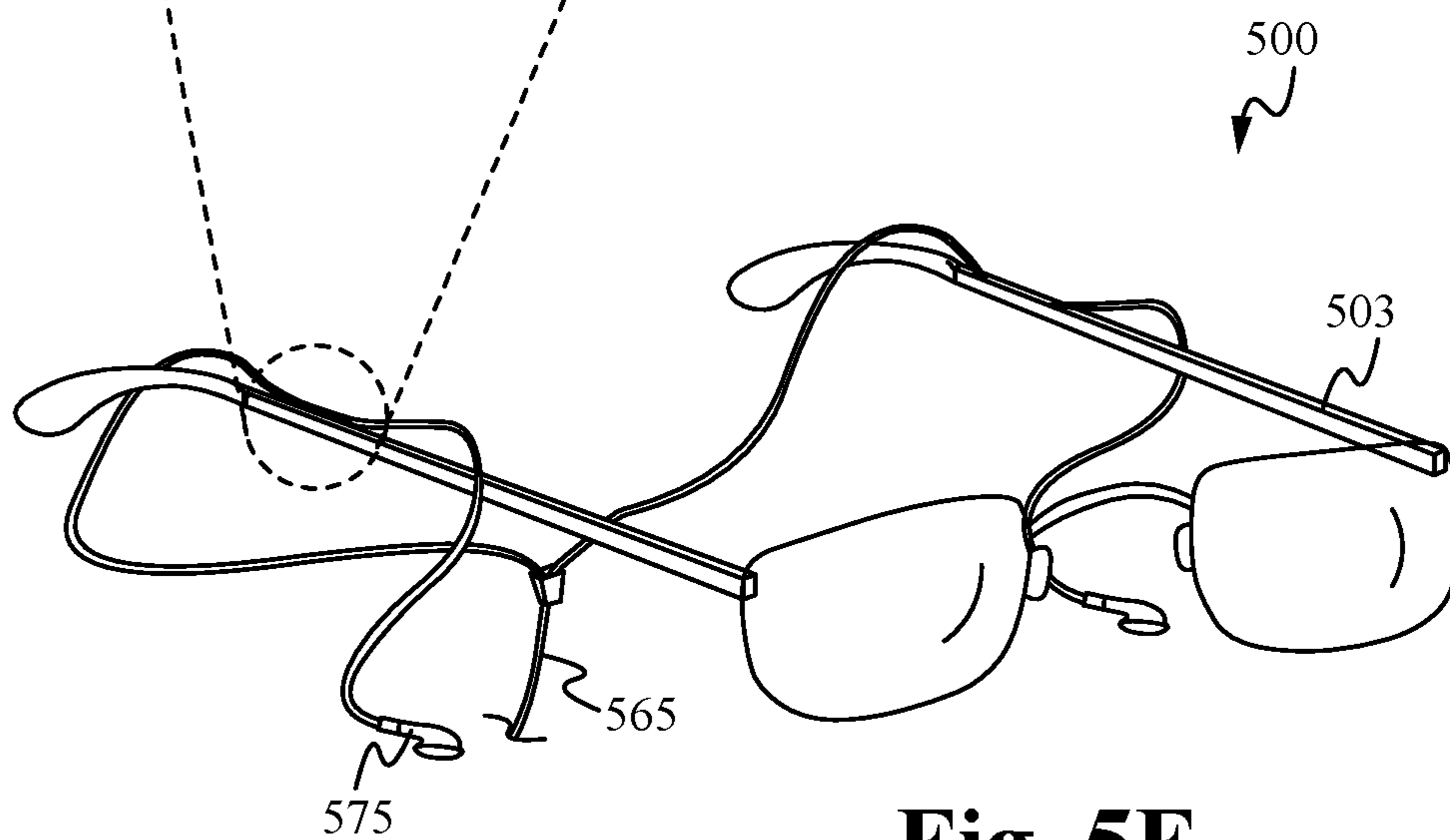
**Fig. 5C**



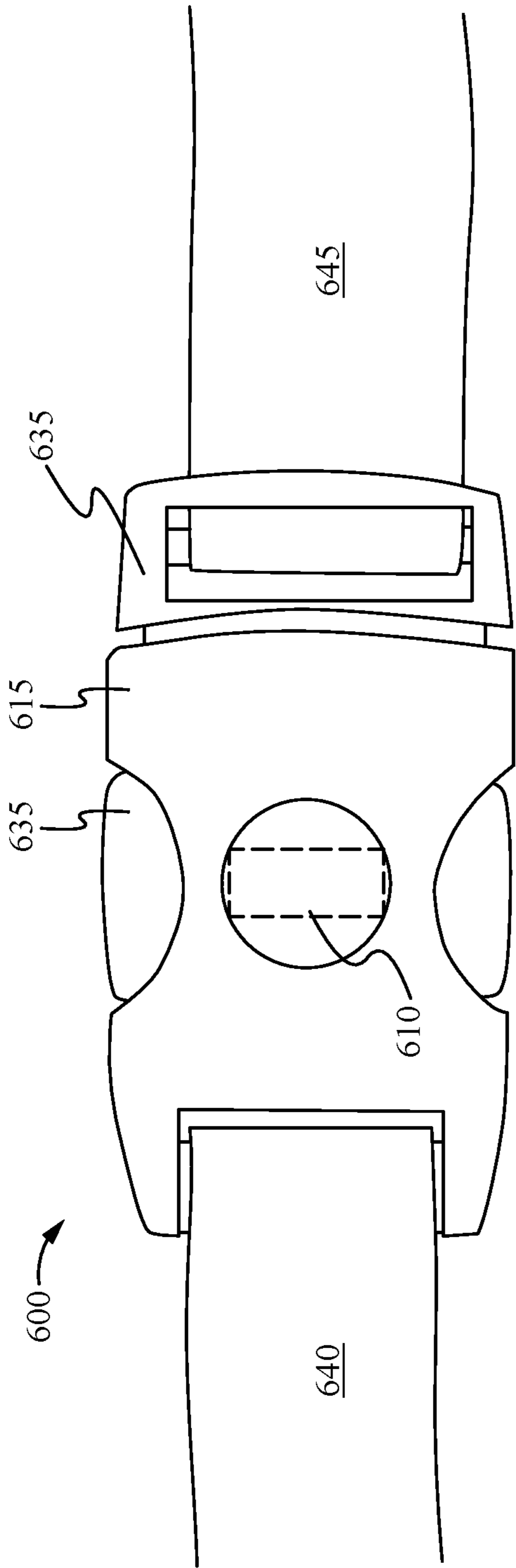
**Fig. 5D**



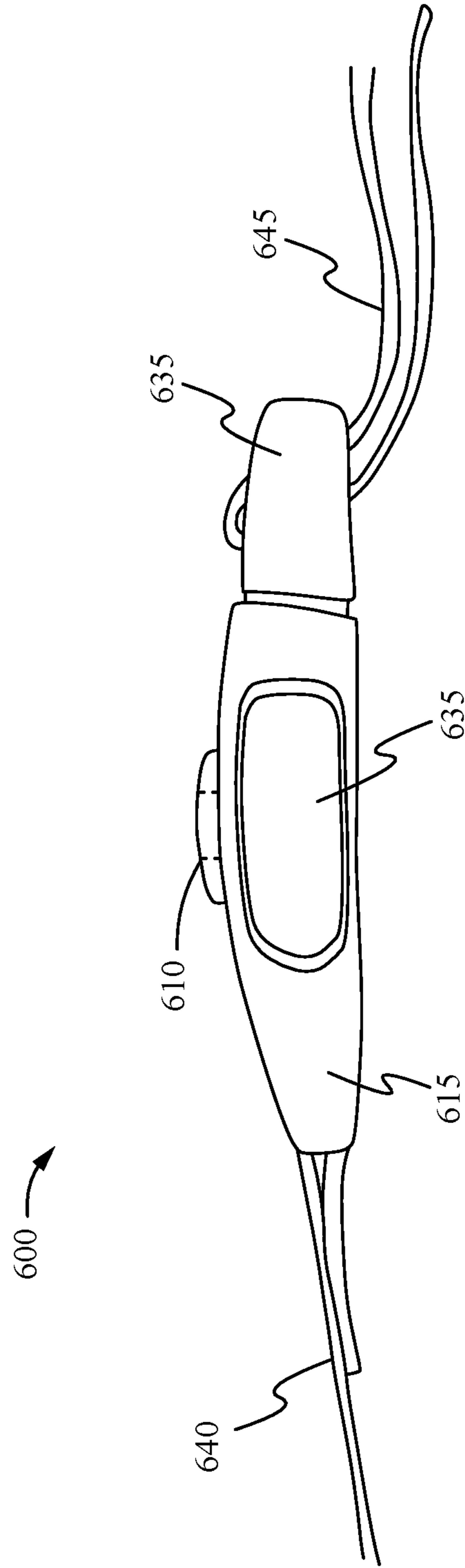
**Fig. 5G**



**Fig. 5F**

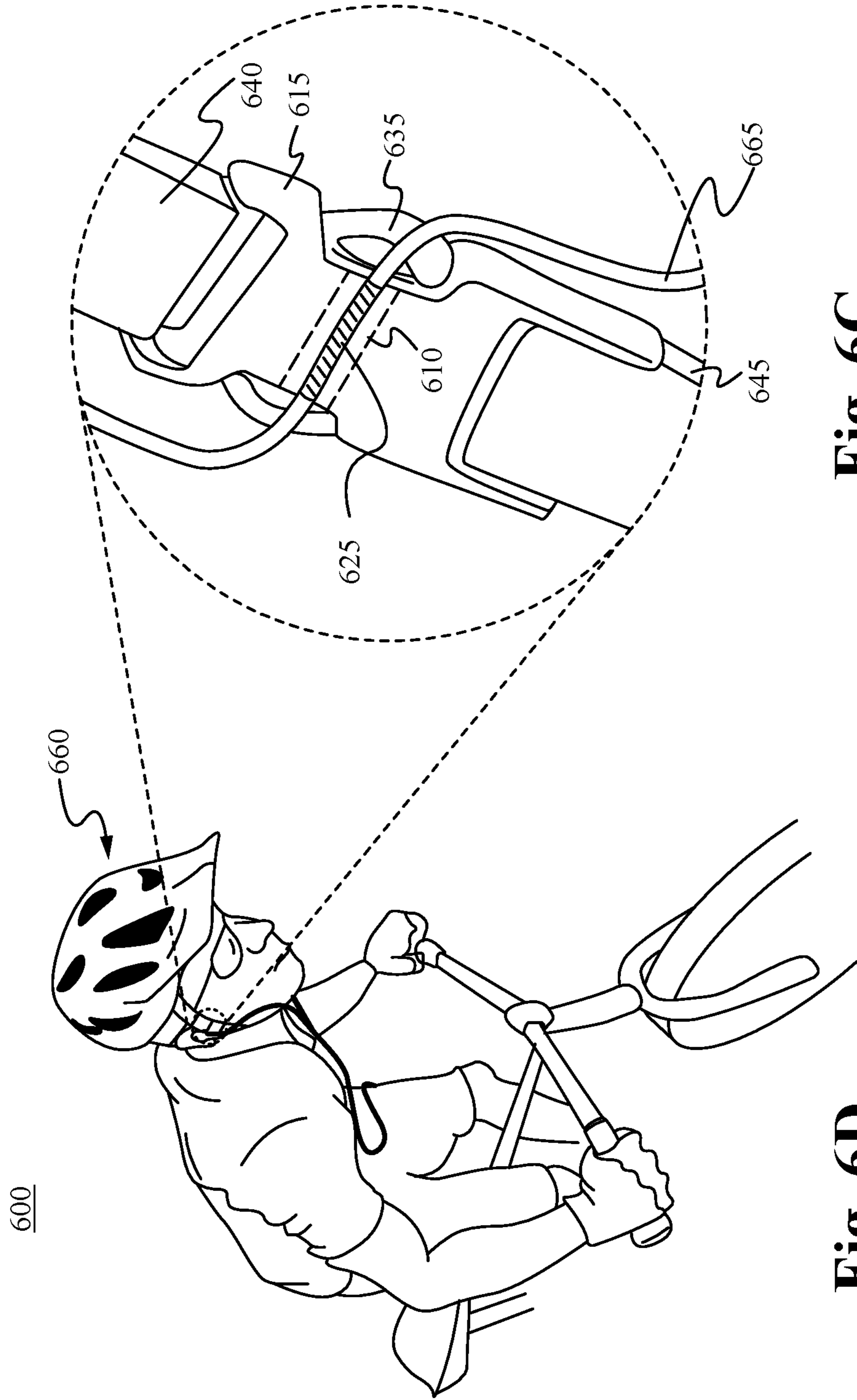


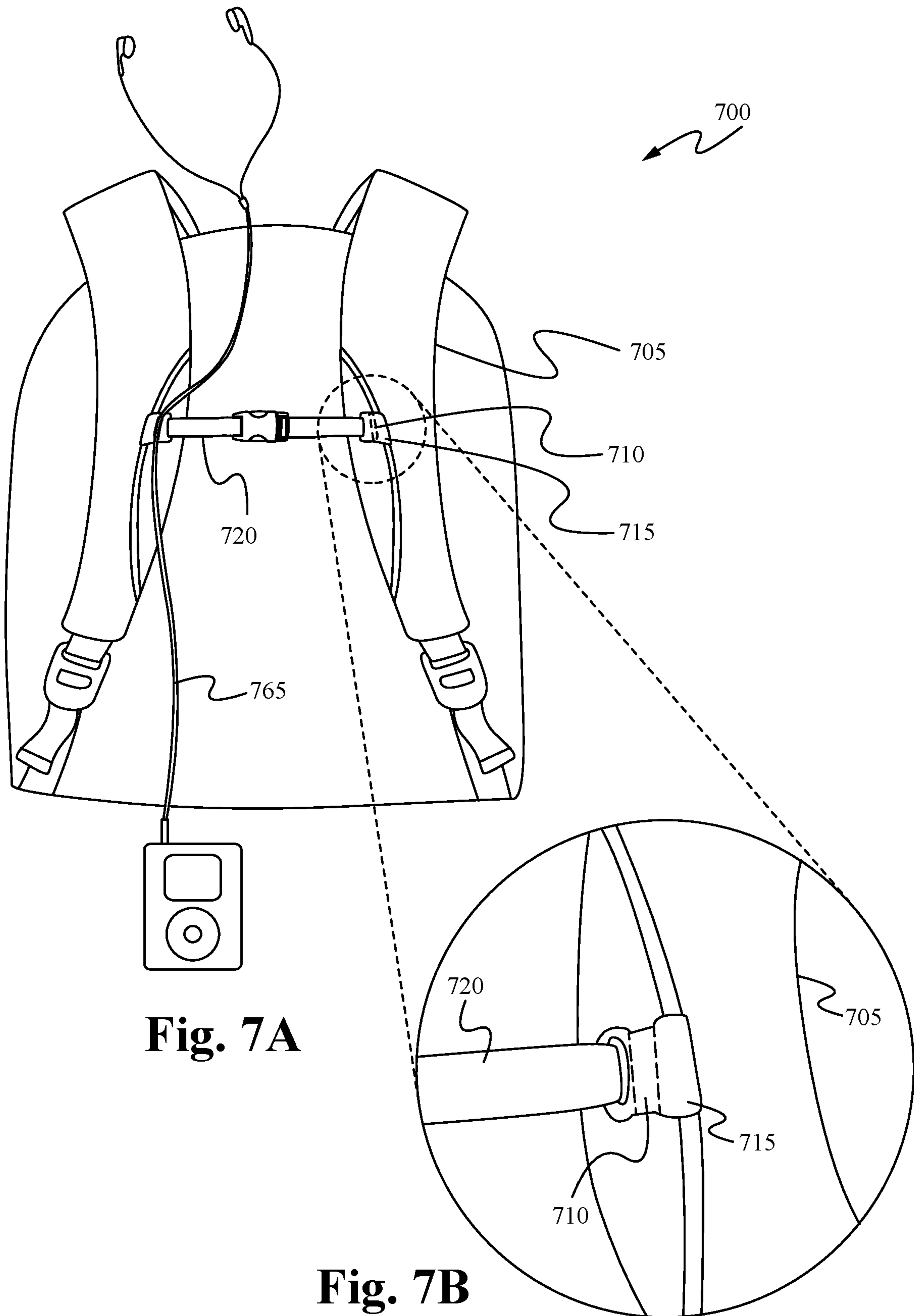
**Fig. 6A**



**Fig. 6B**



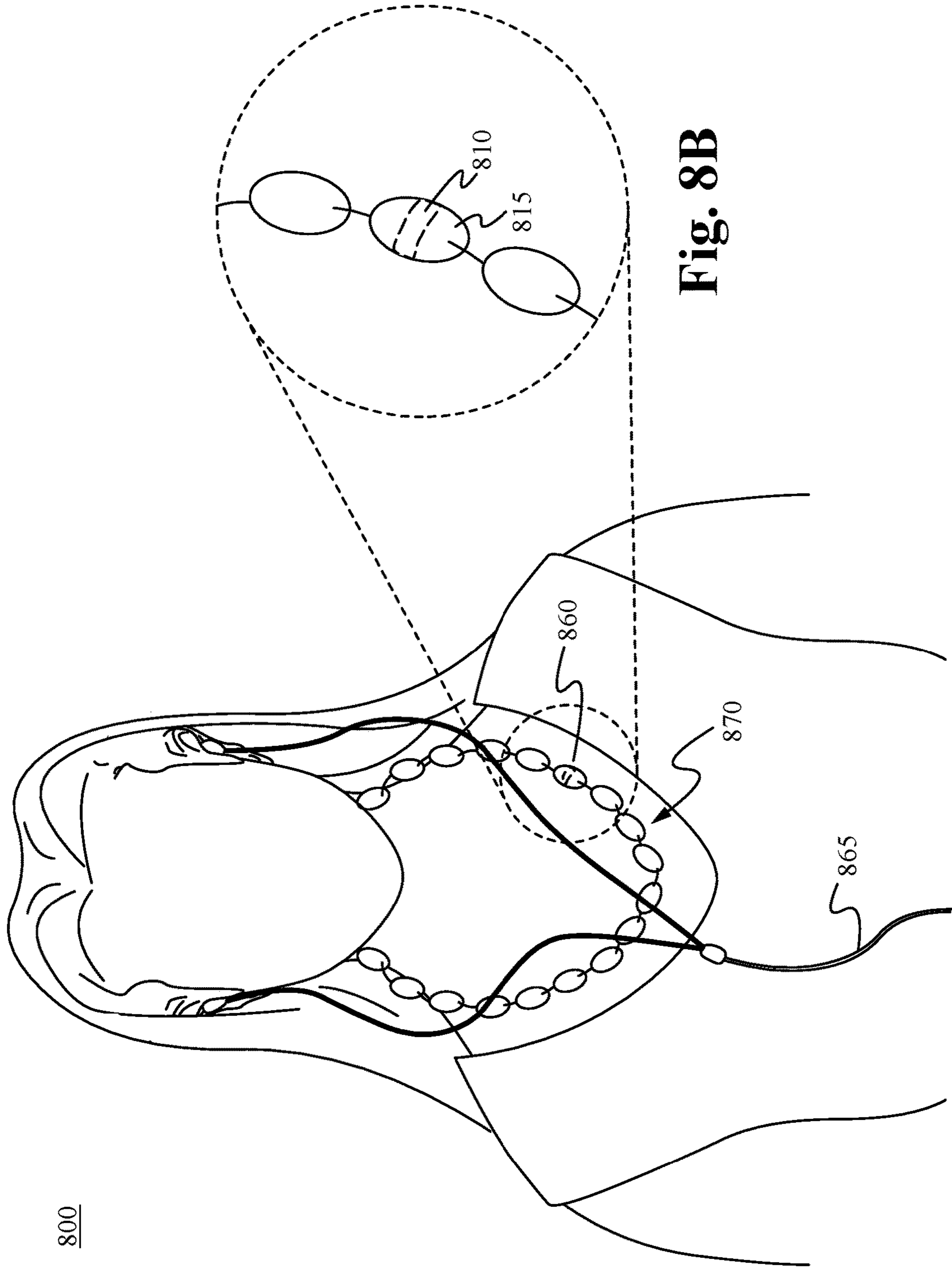




**Fig. 7A**

**Fig. 7B**

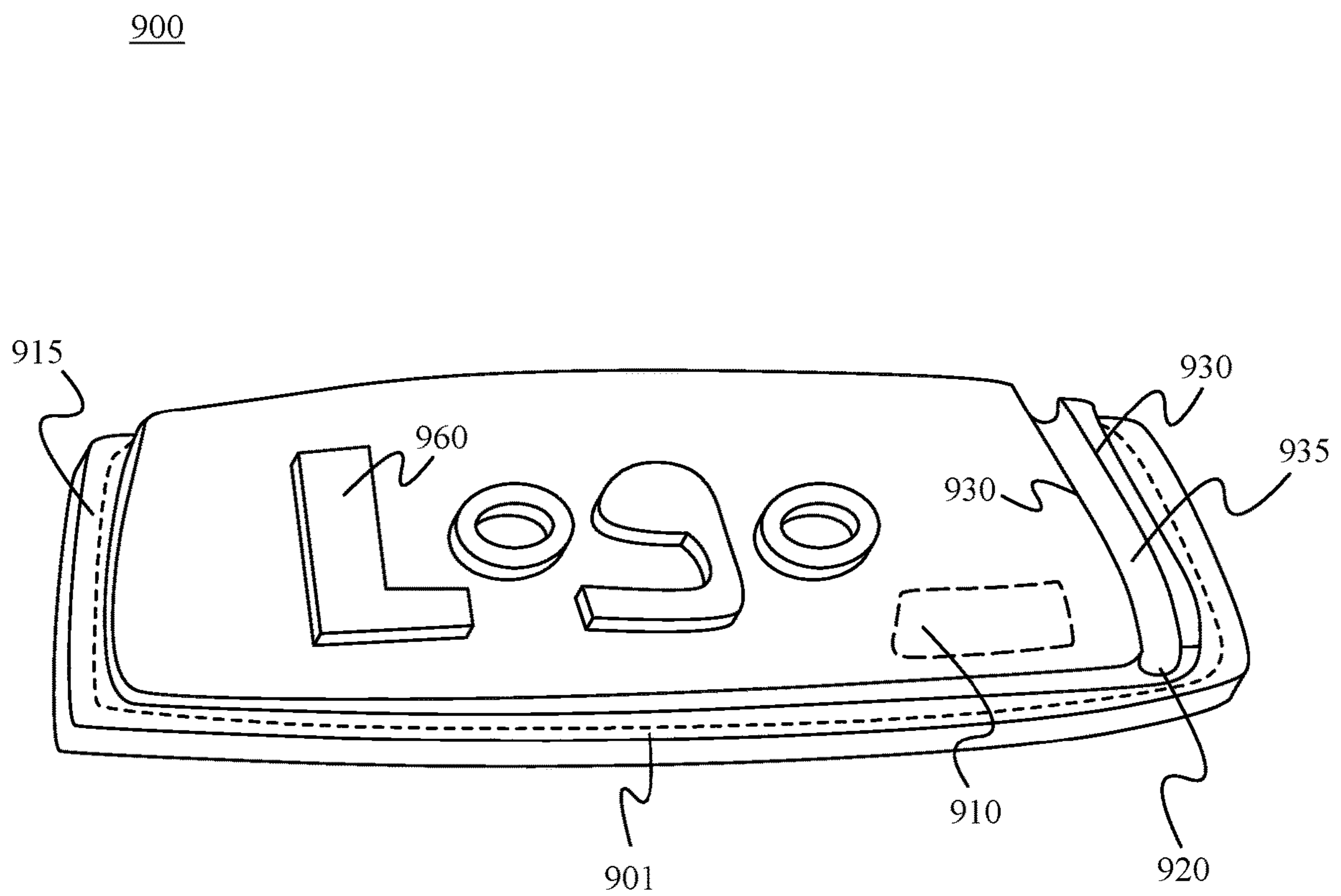
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**Fig. 8B**

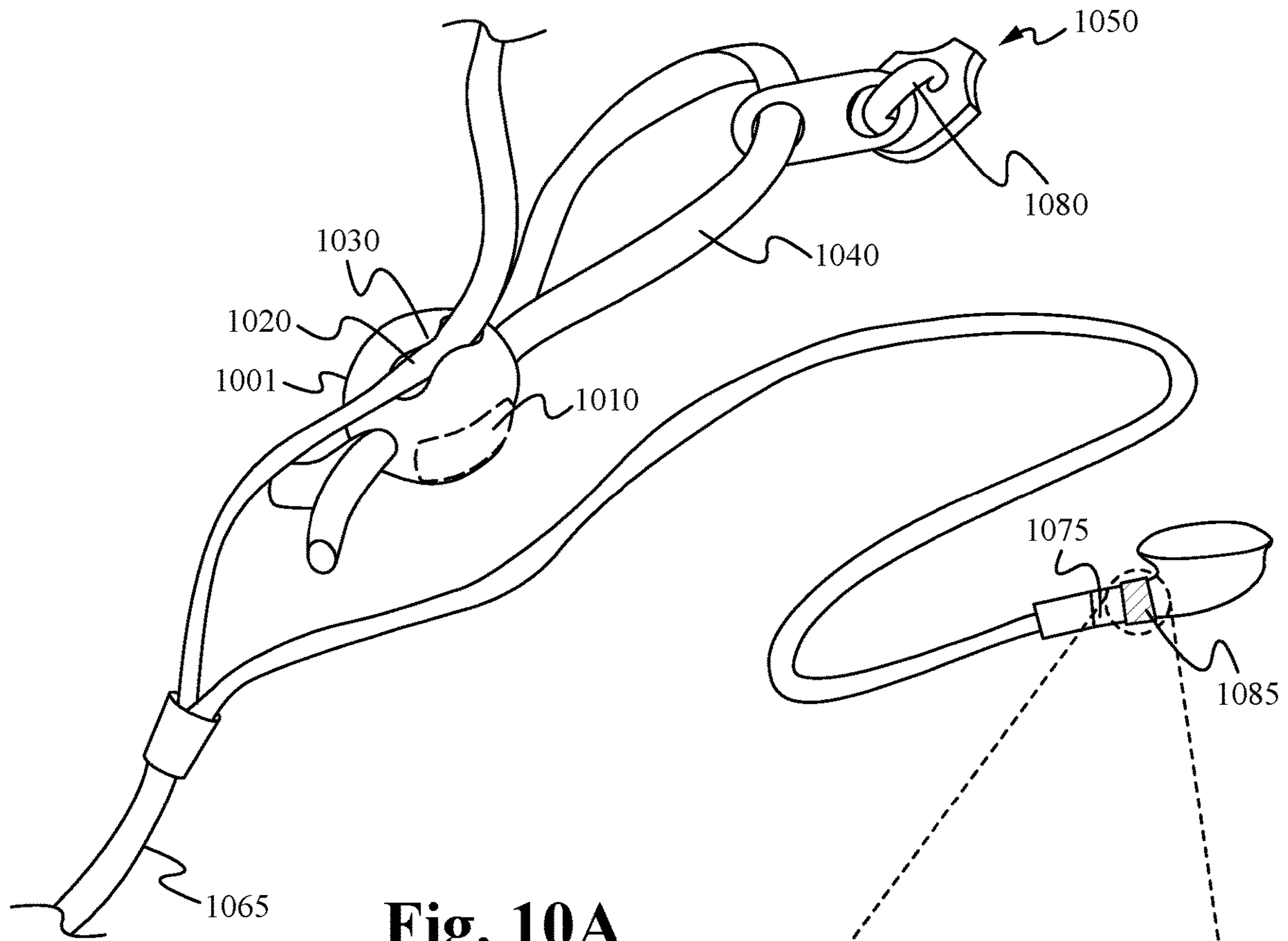
**Fig. 8A**



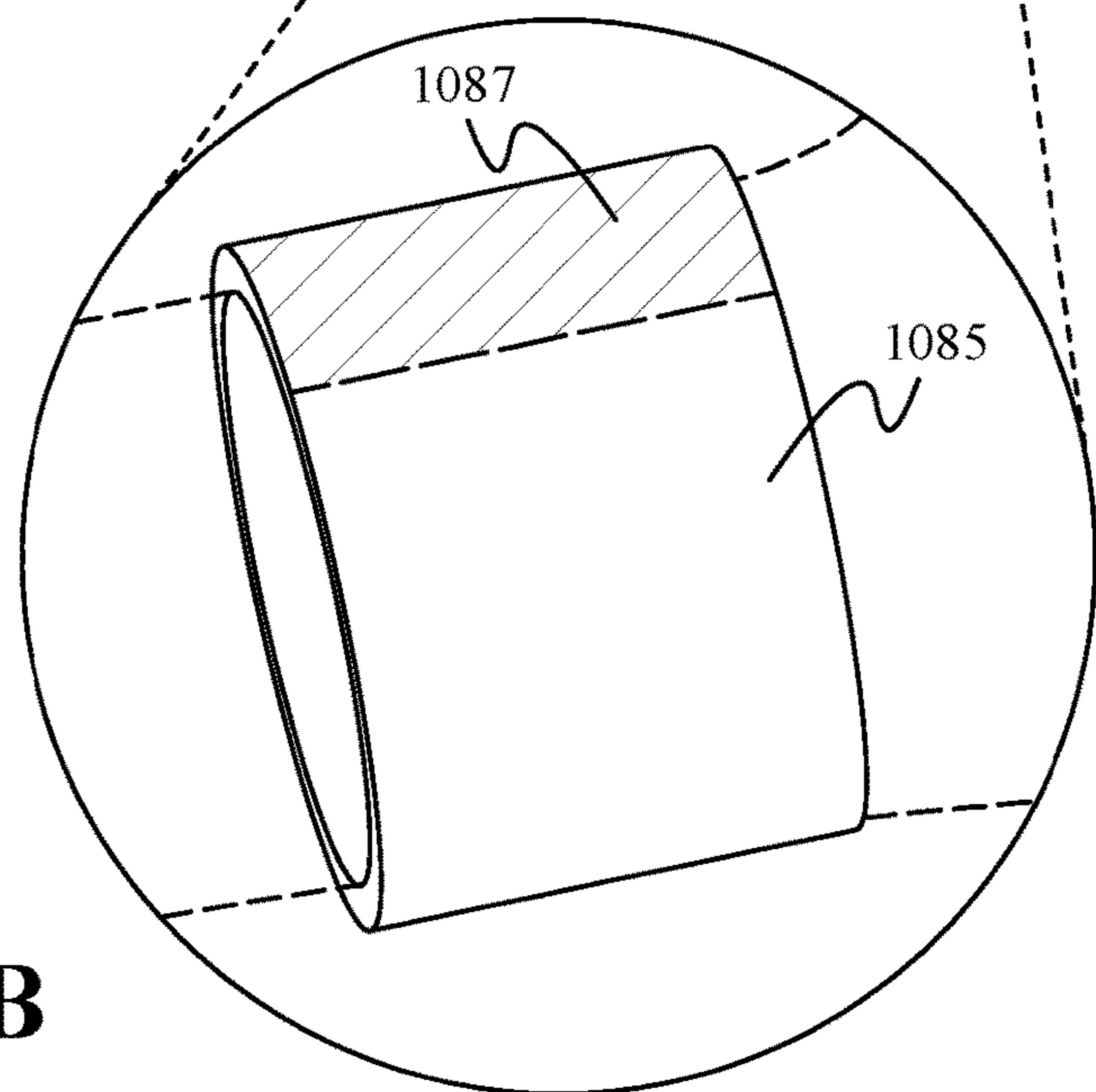


**Fig. 9**

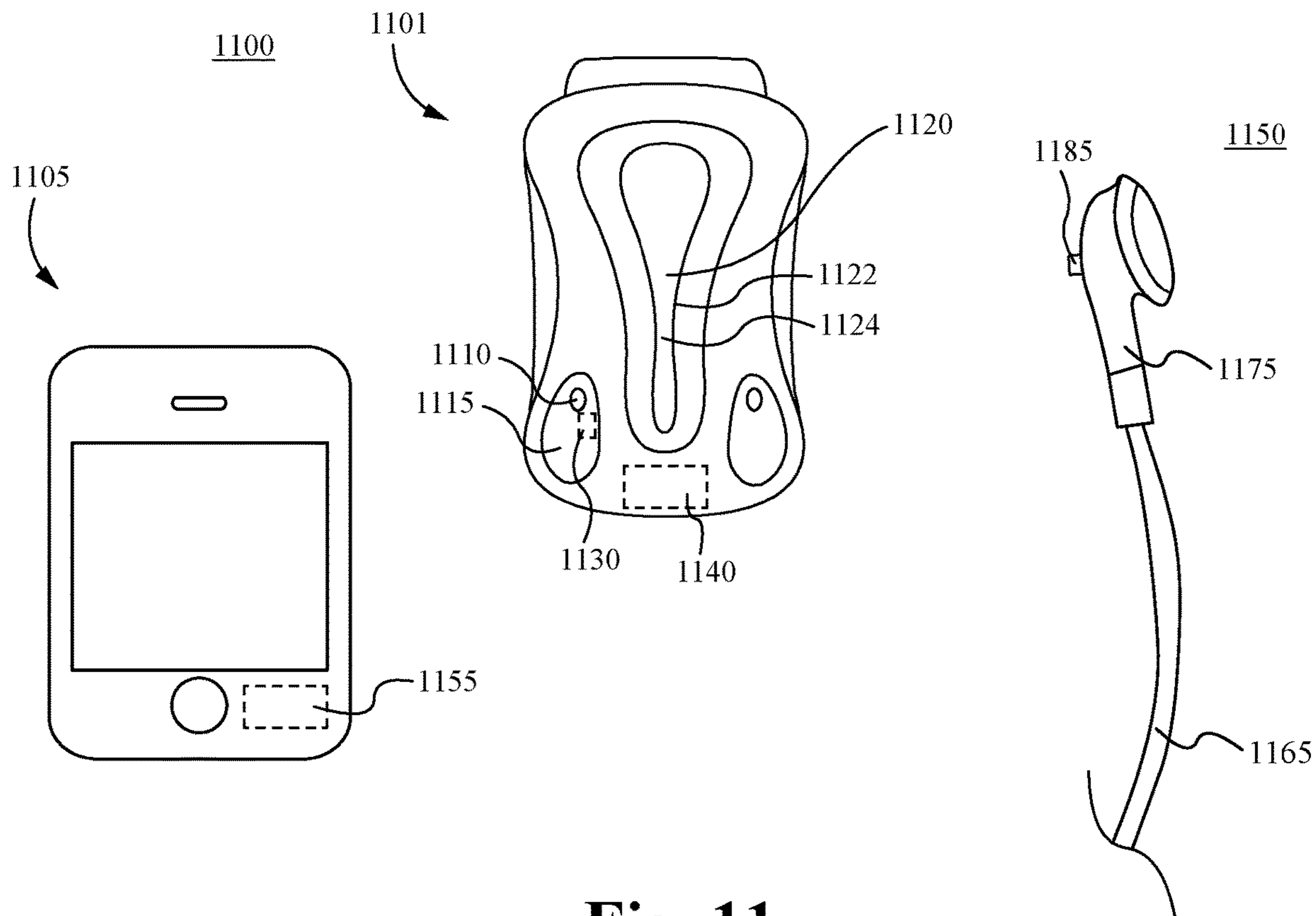
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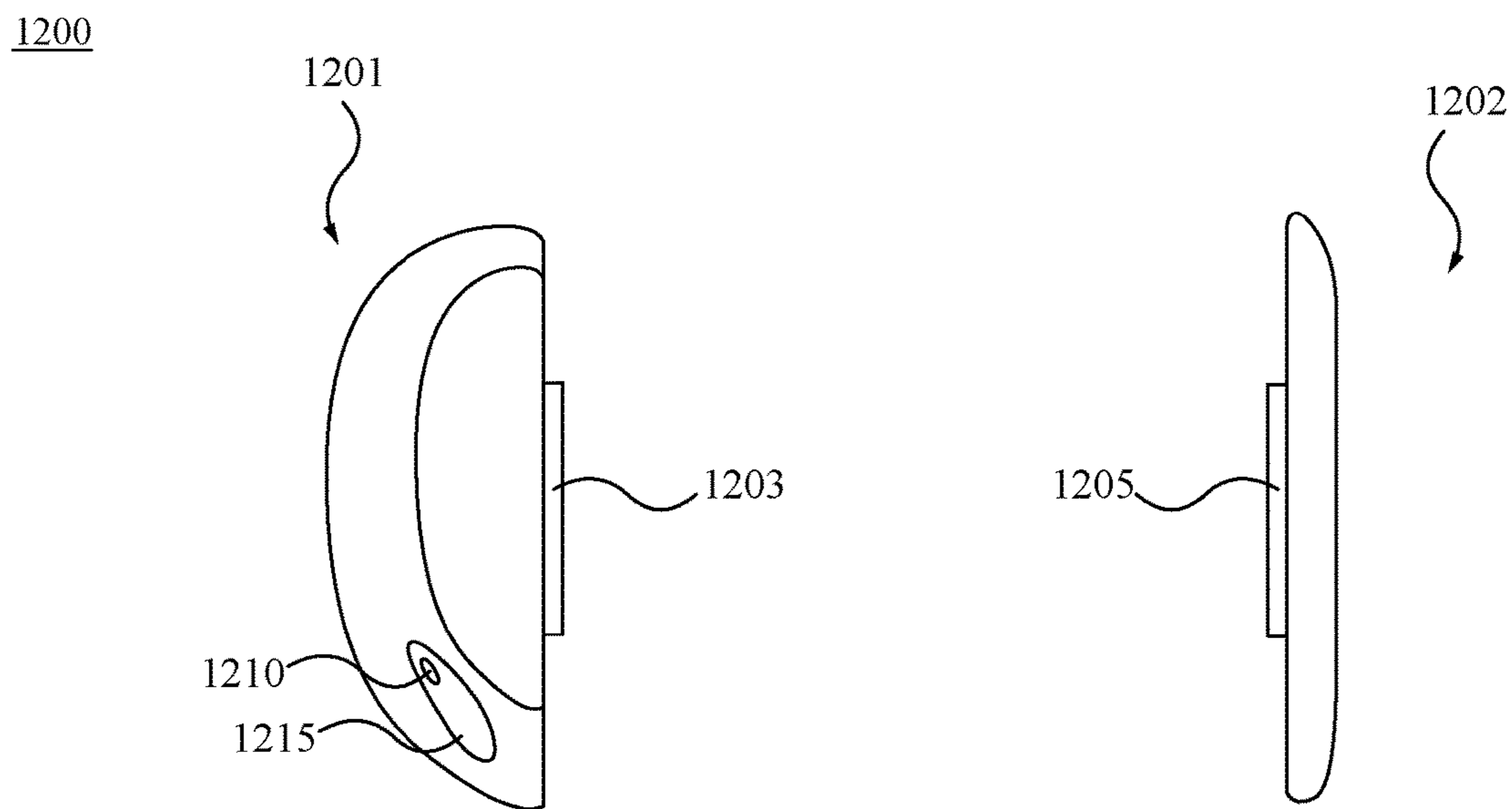
**Fig. 10A**



**Fig. 10B**



**Fig. 11**

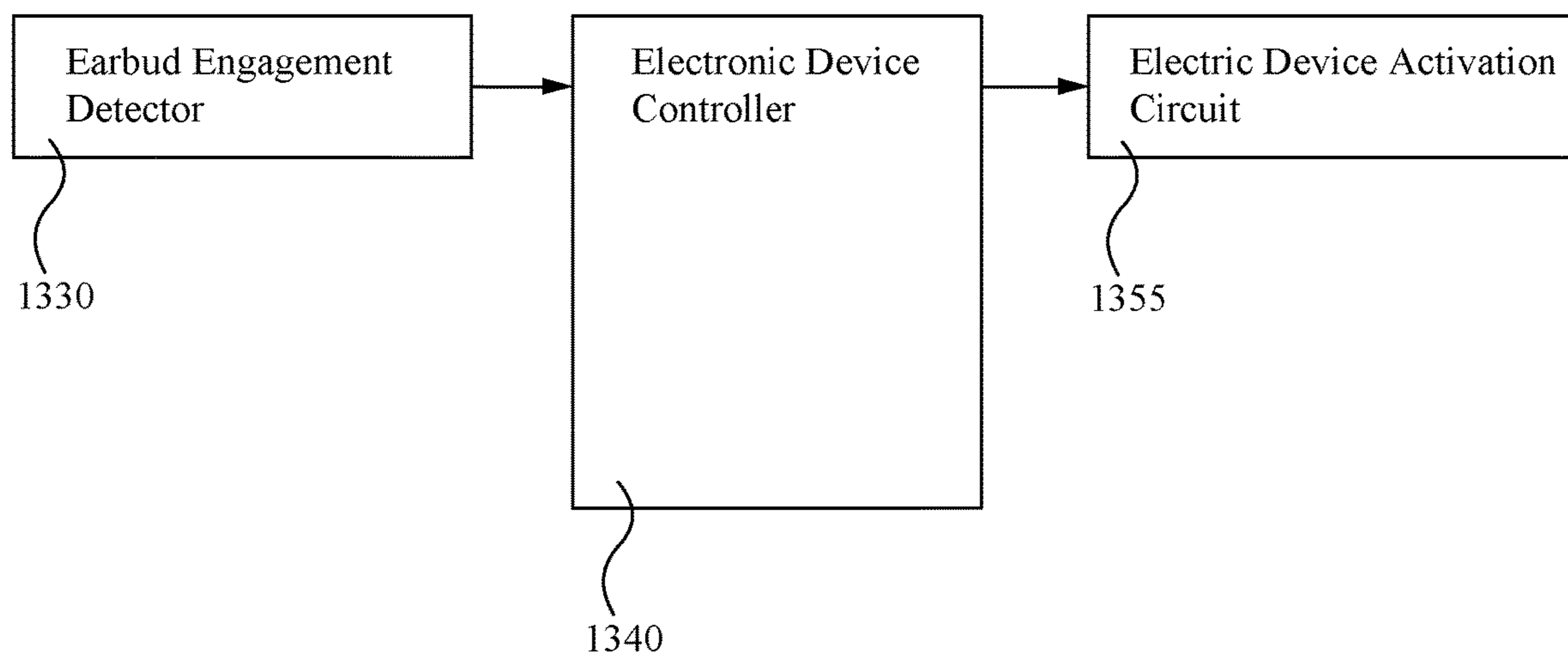


**Fig. 12A**

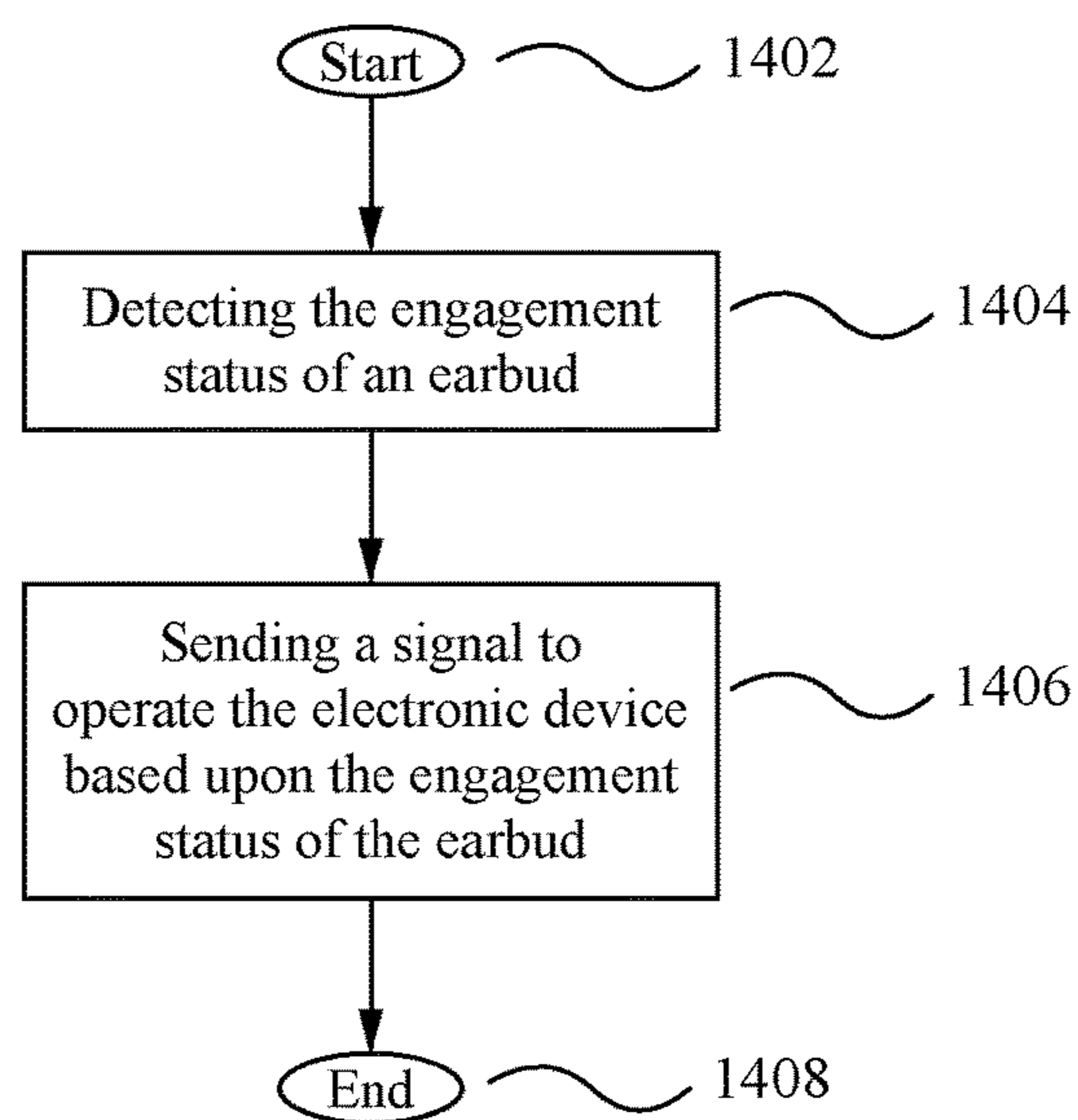
**Fig. 12B**



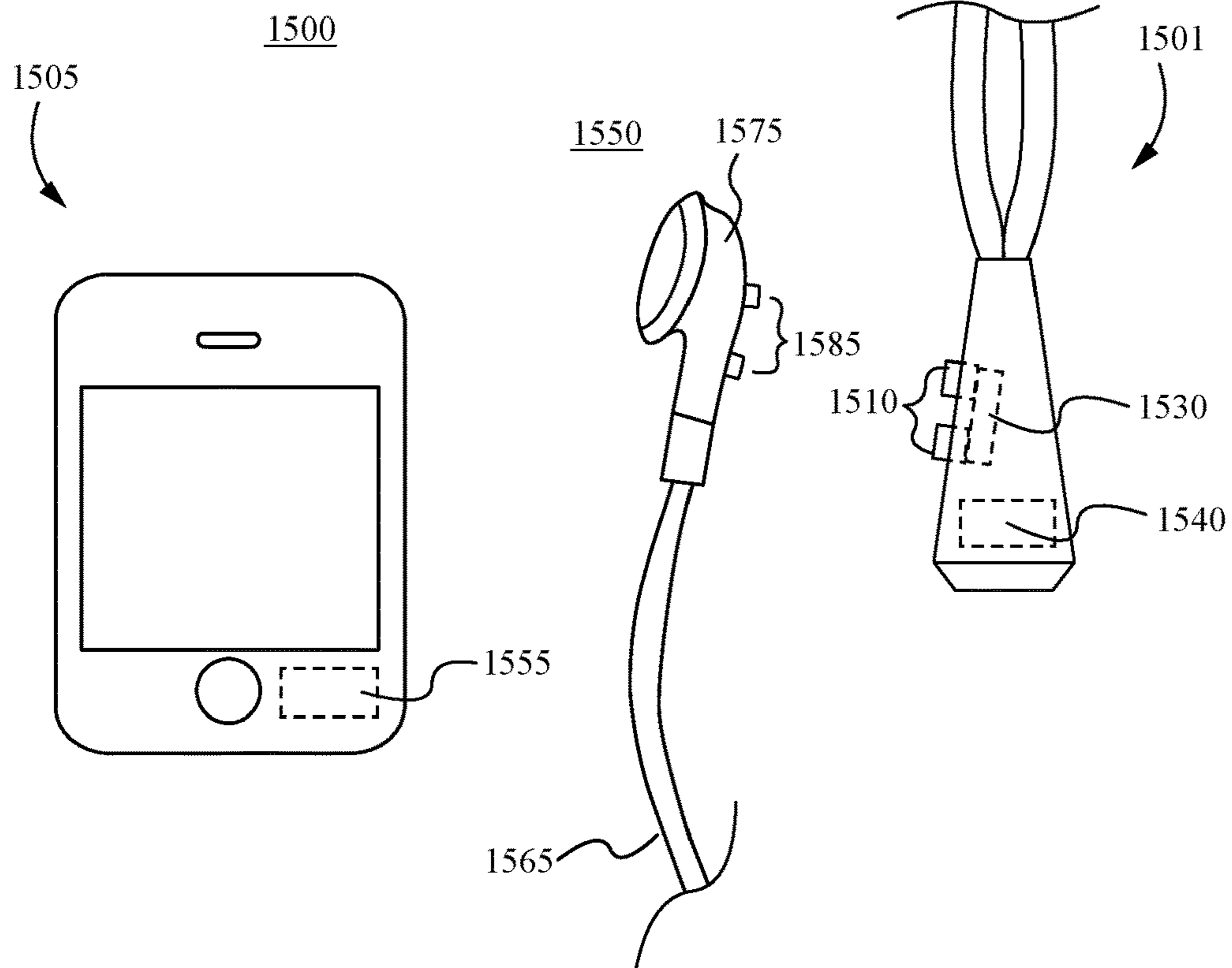
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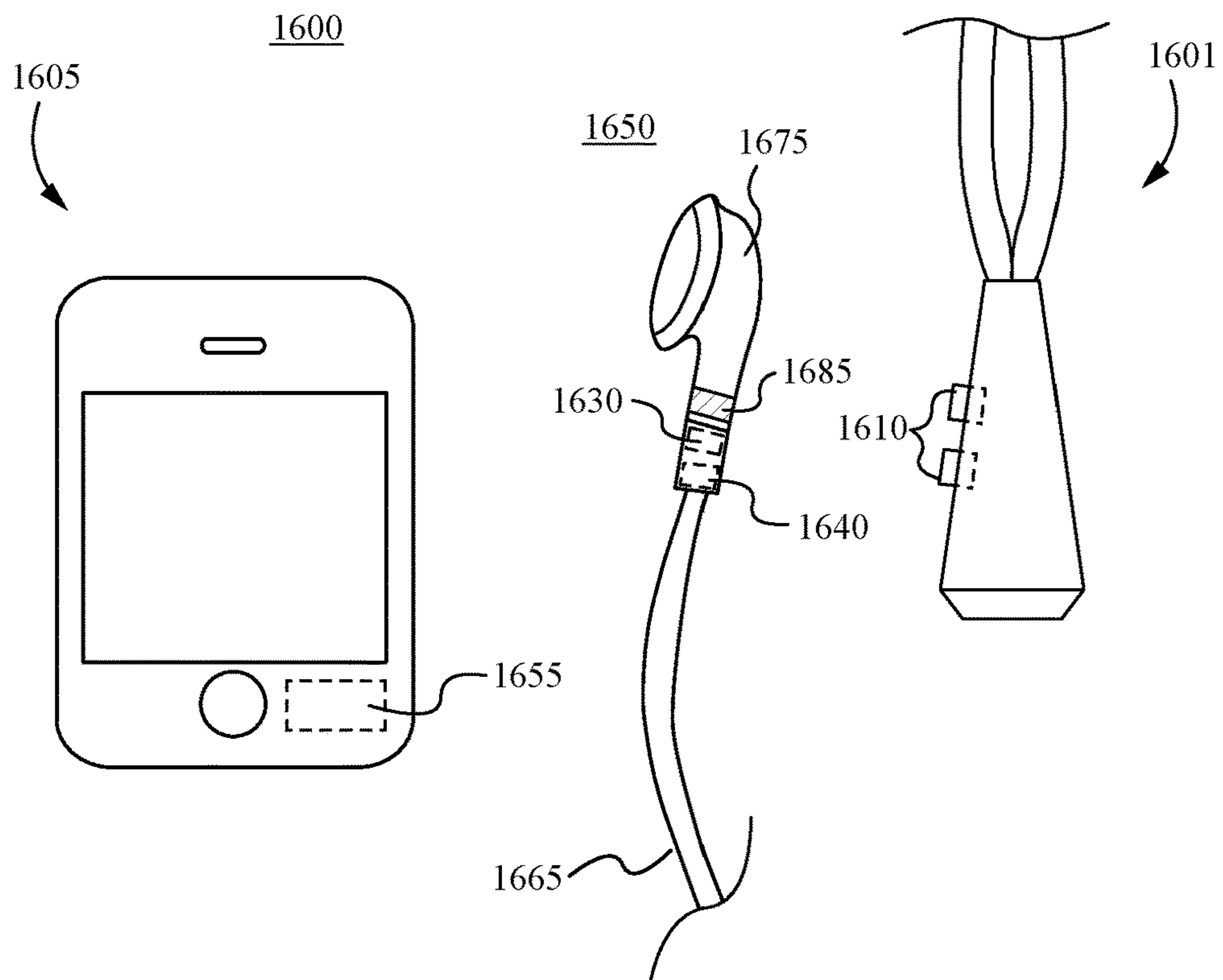
**Fig. 13**



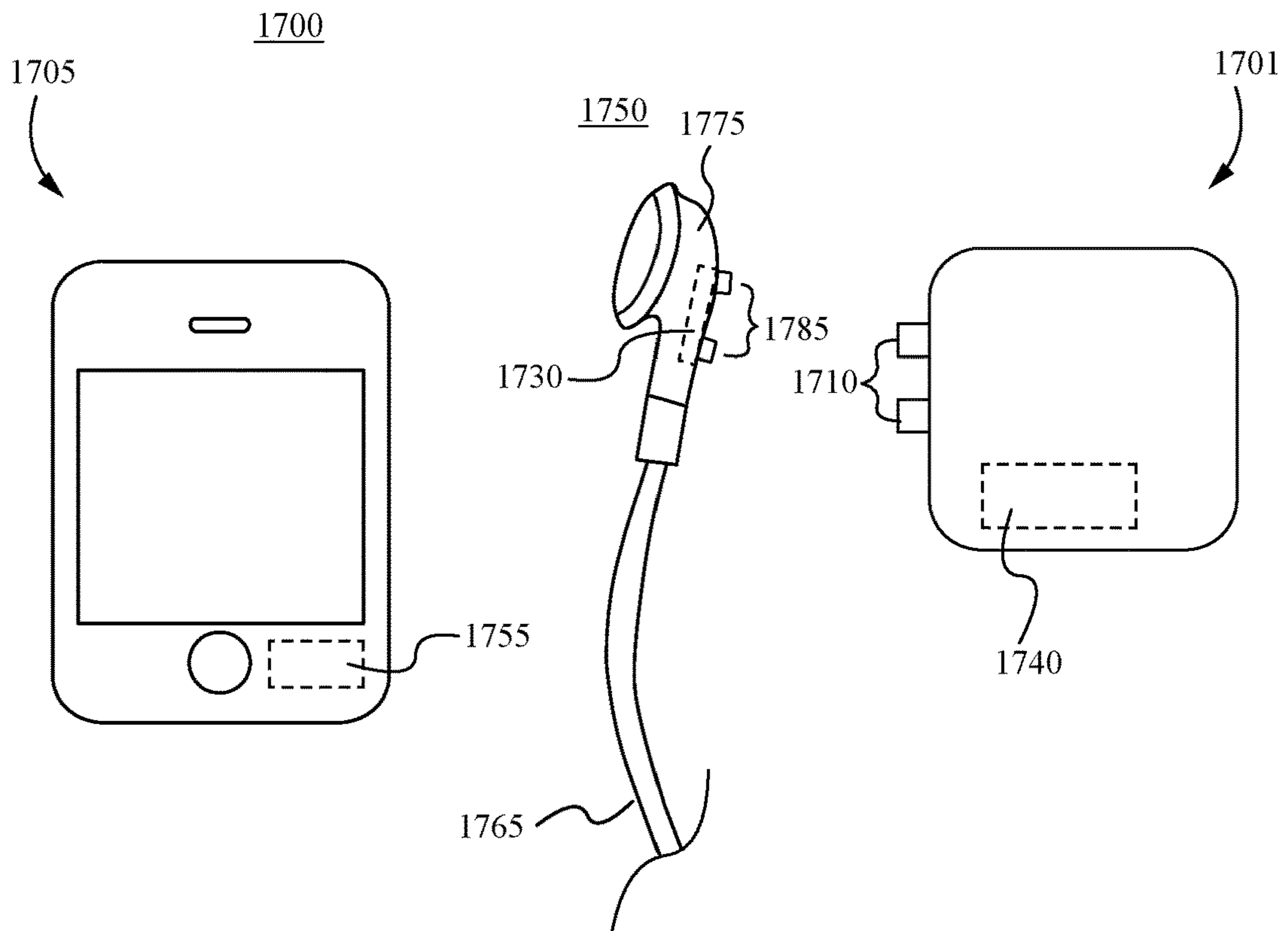
**Fig. 14**



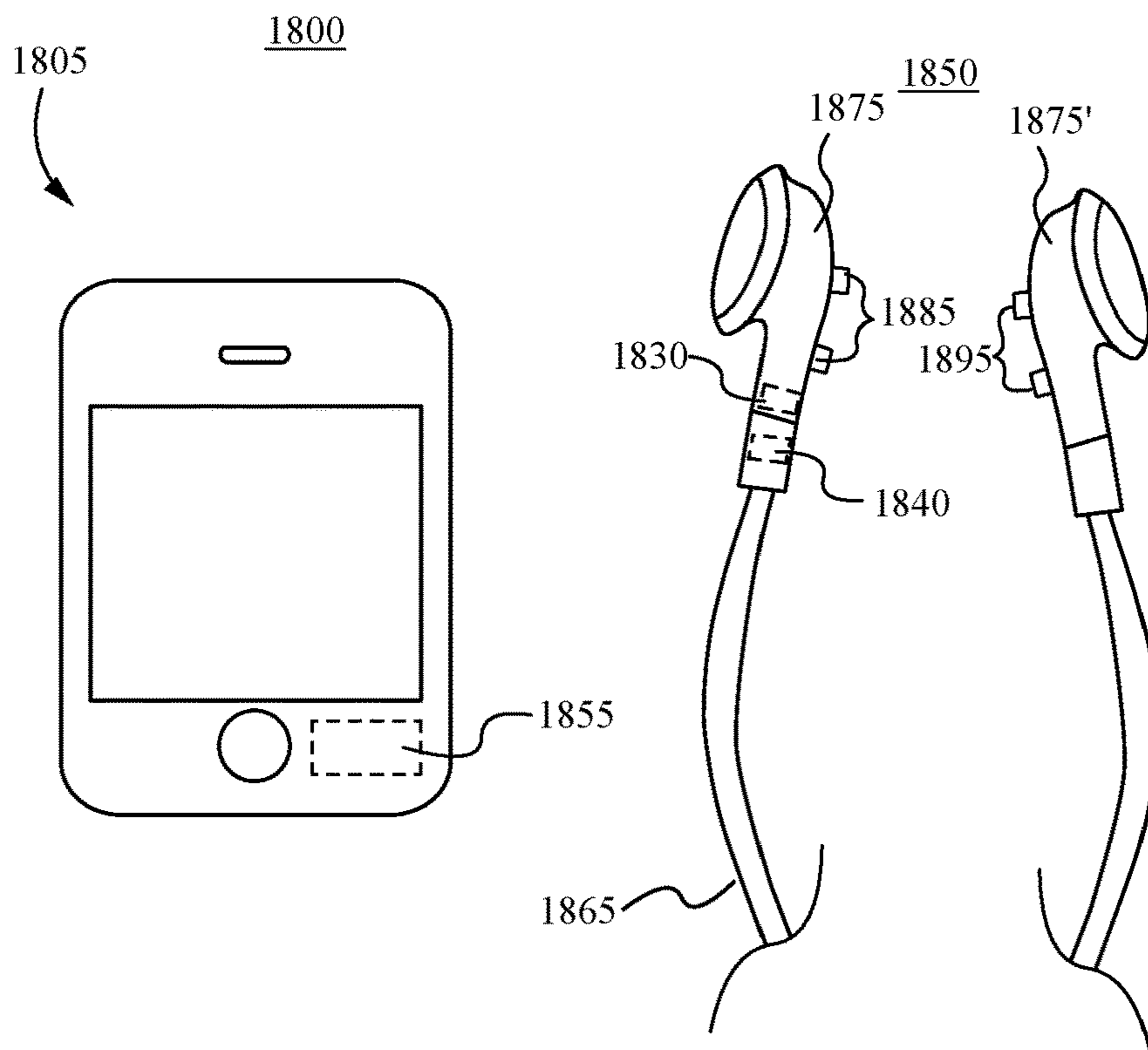
**Fig. 15**



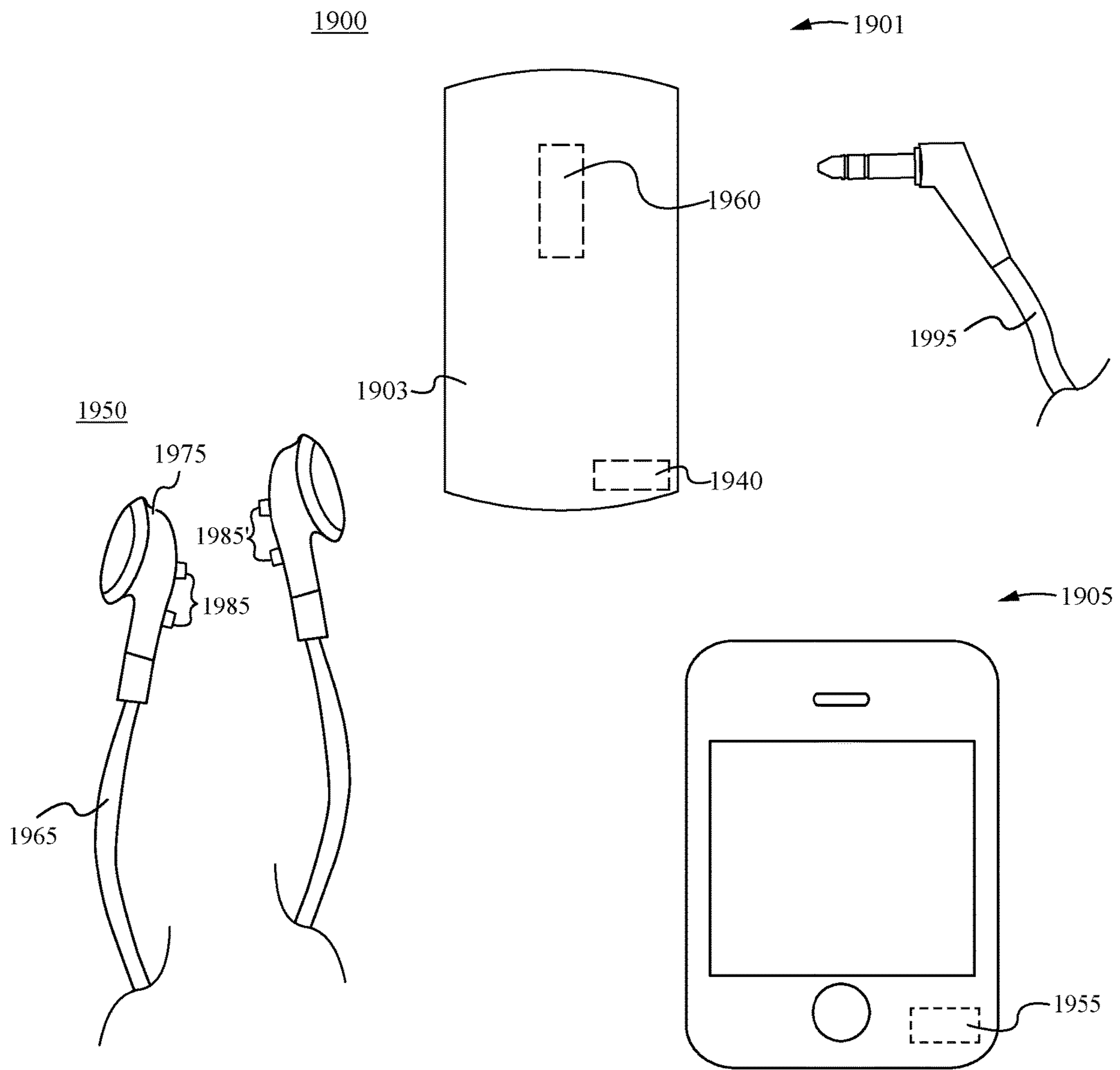
**Fig. 16**



**Fig. 17**

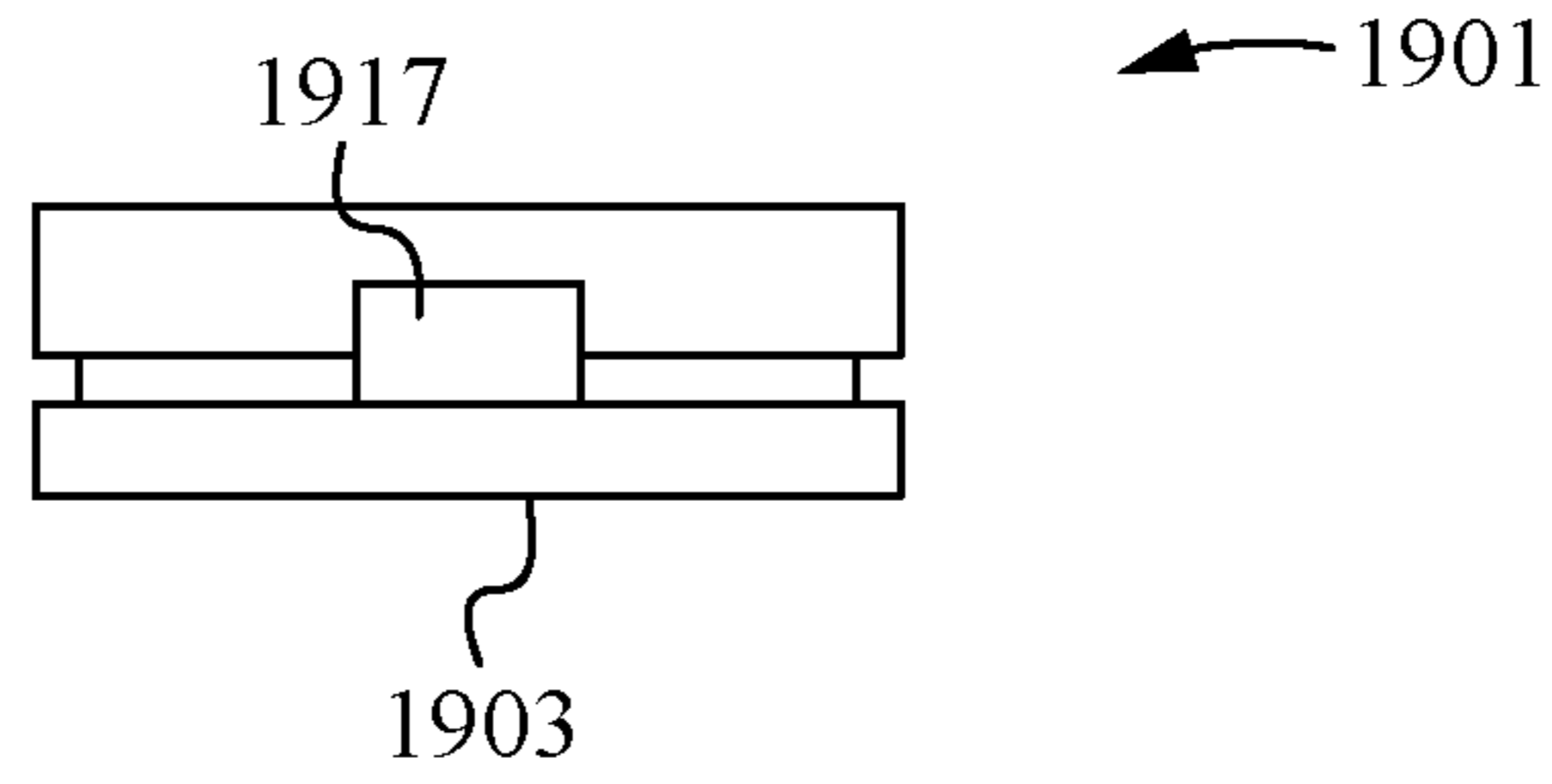


**Fig. 18**



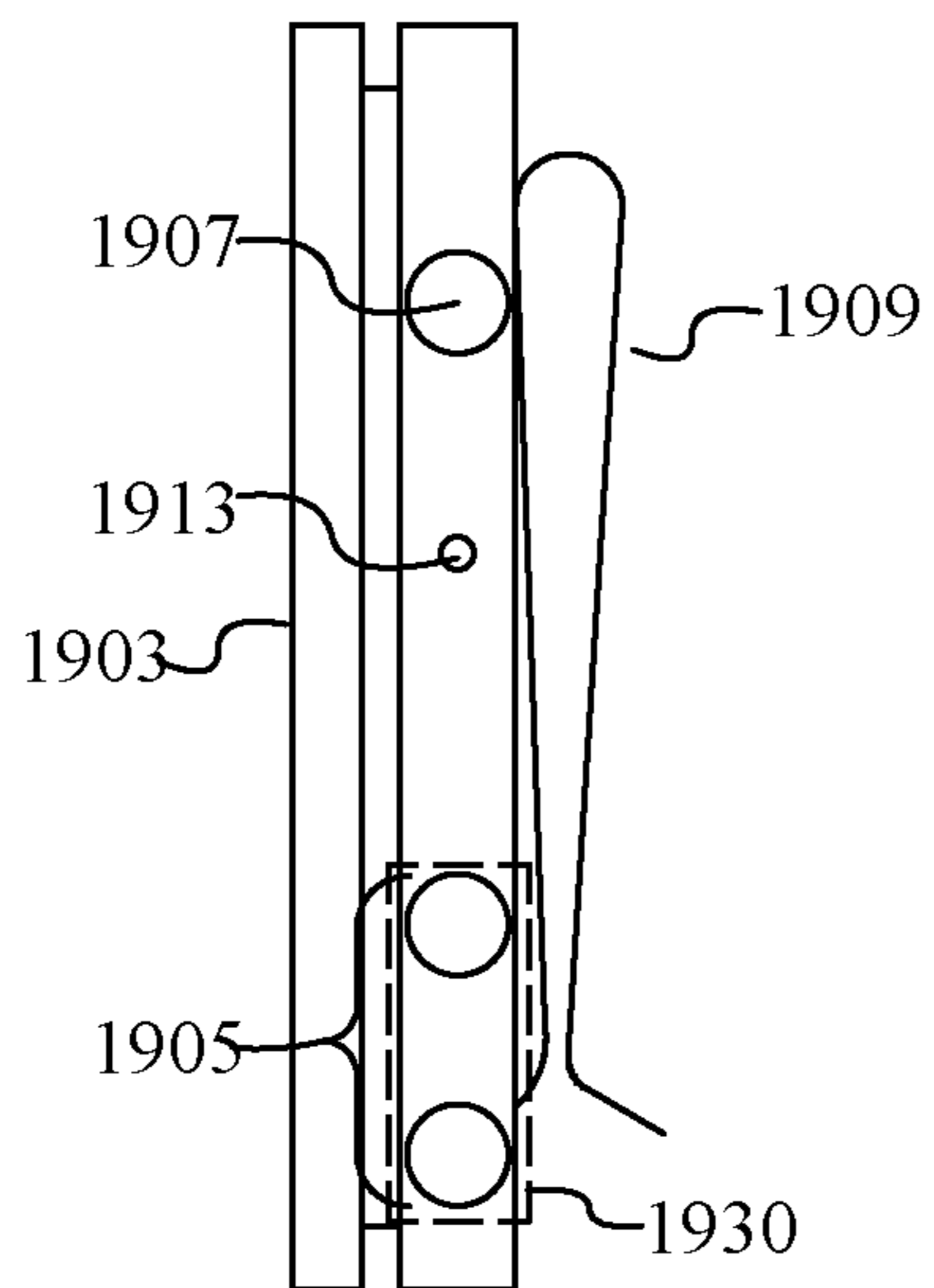
**Fig. 19A**





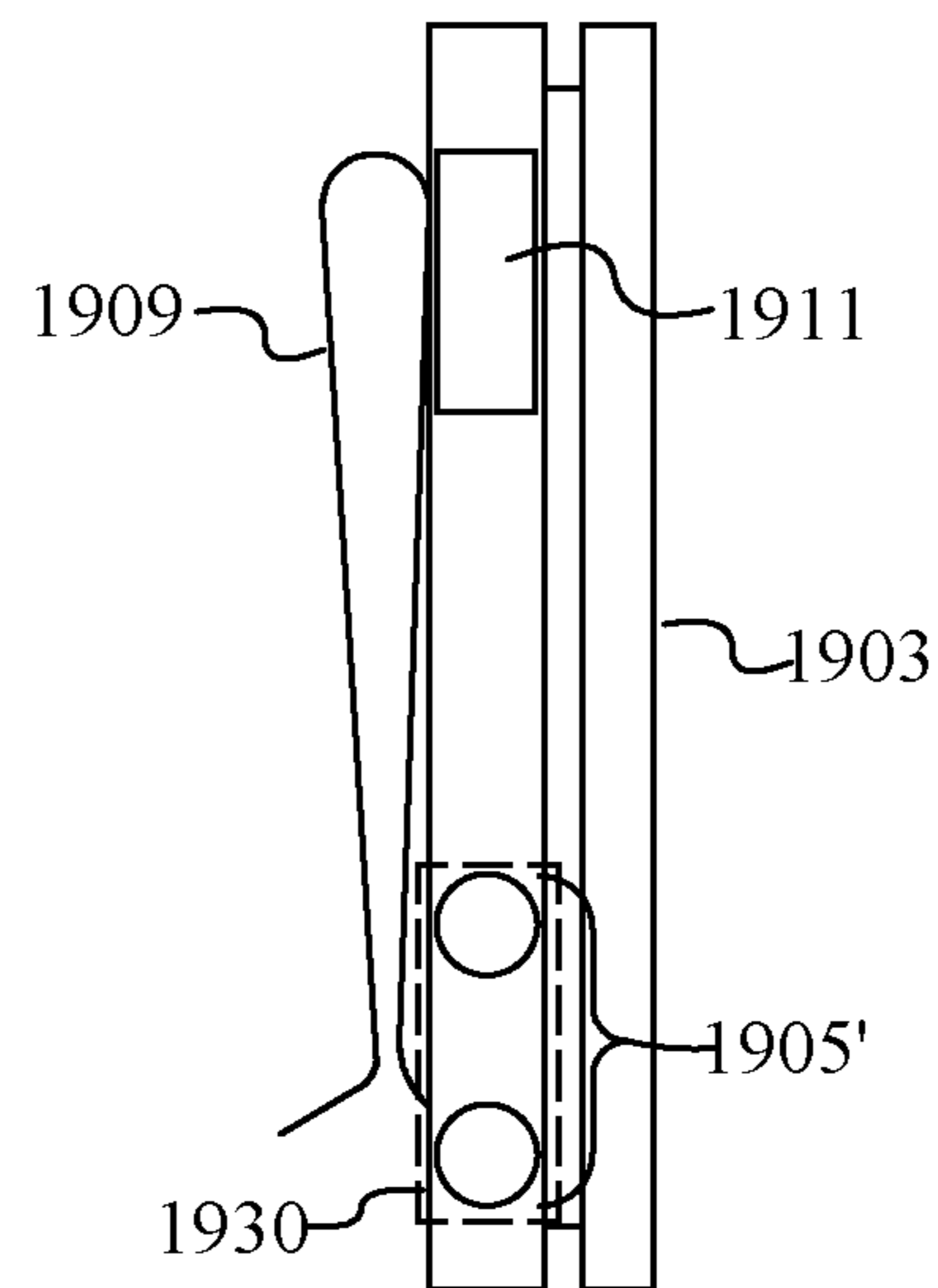
**Fig. 19E**

1901 →

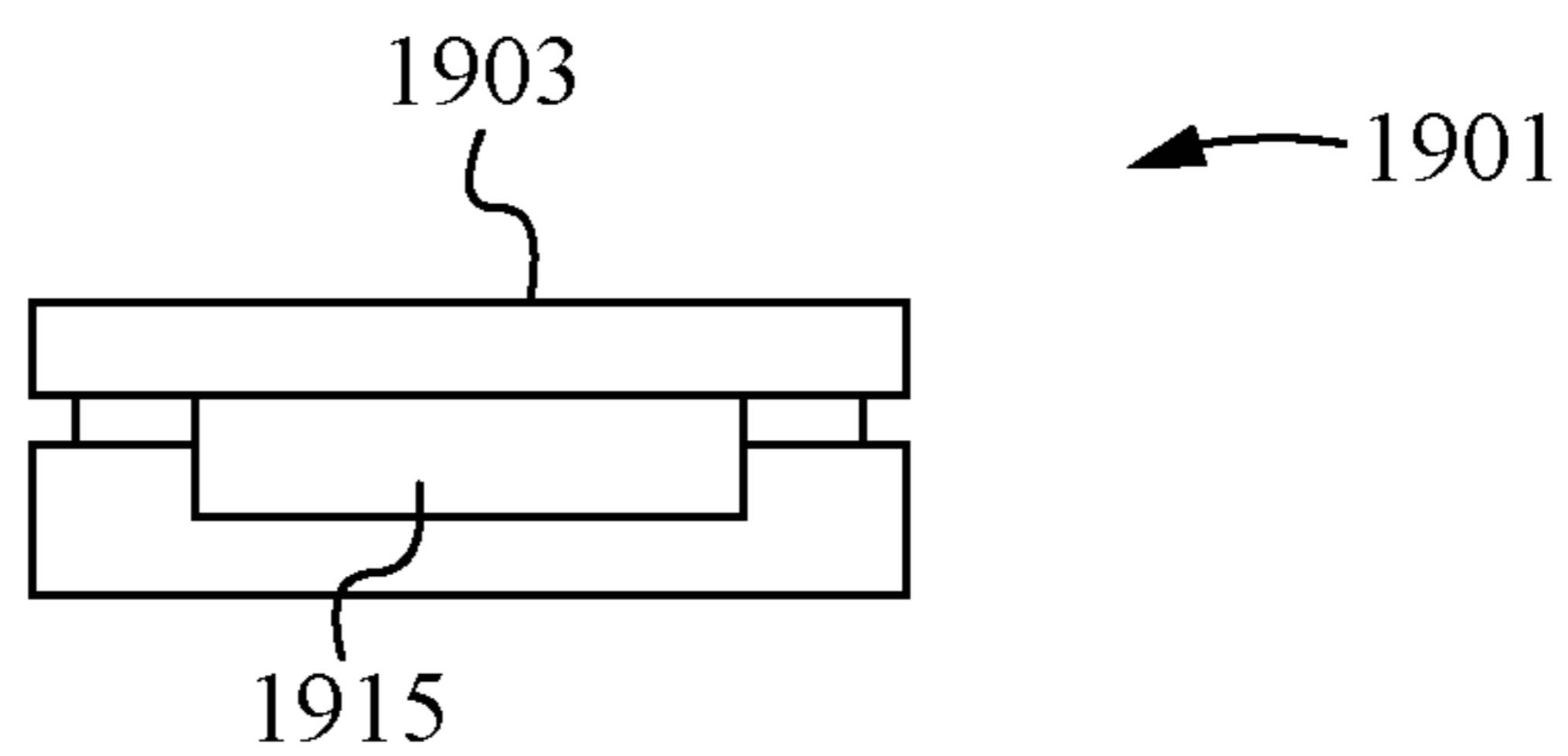


**Fig. 19B**

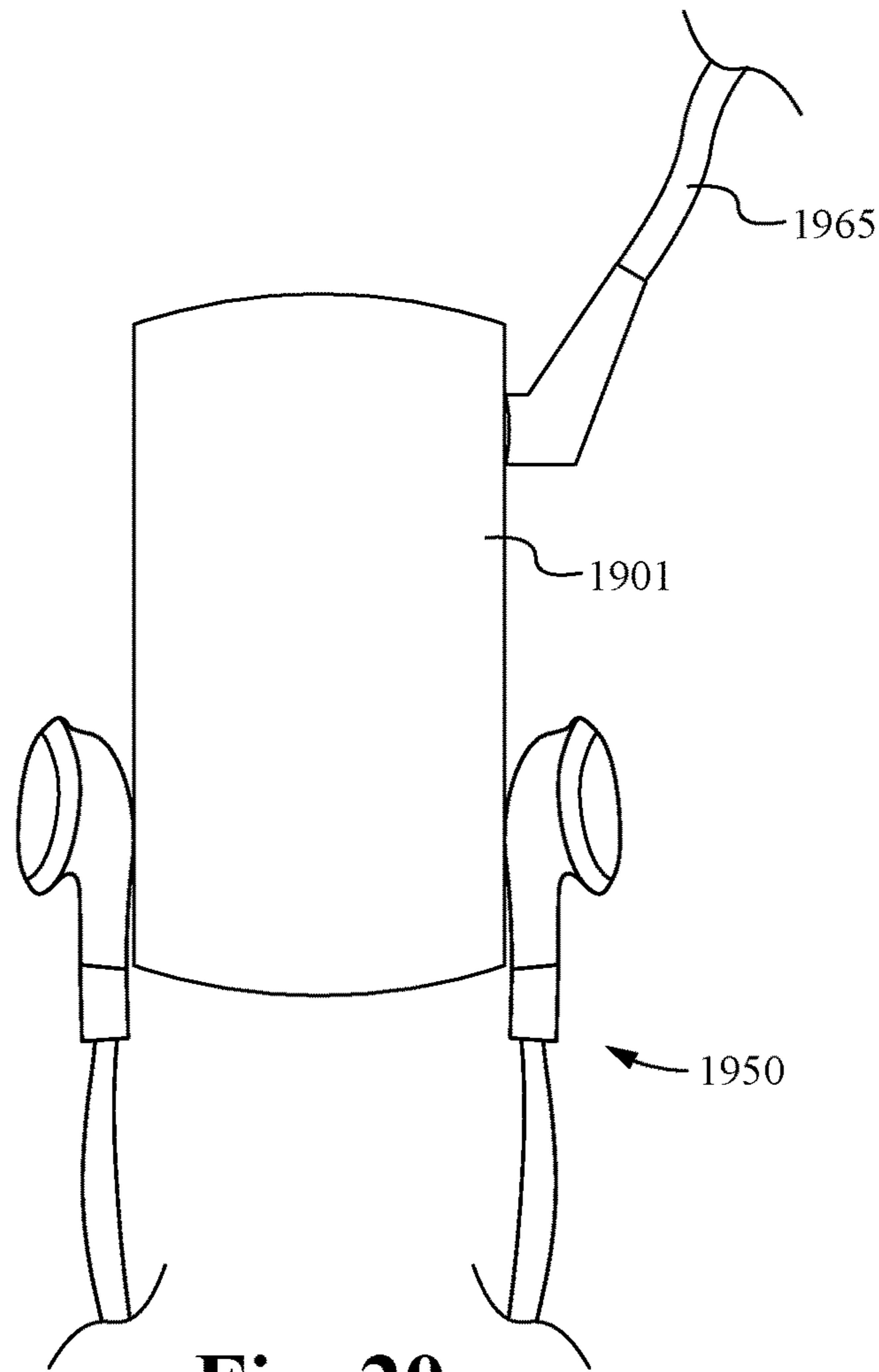
← 1901



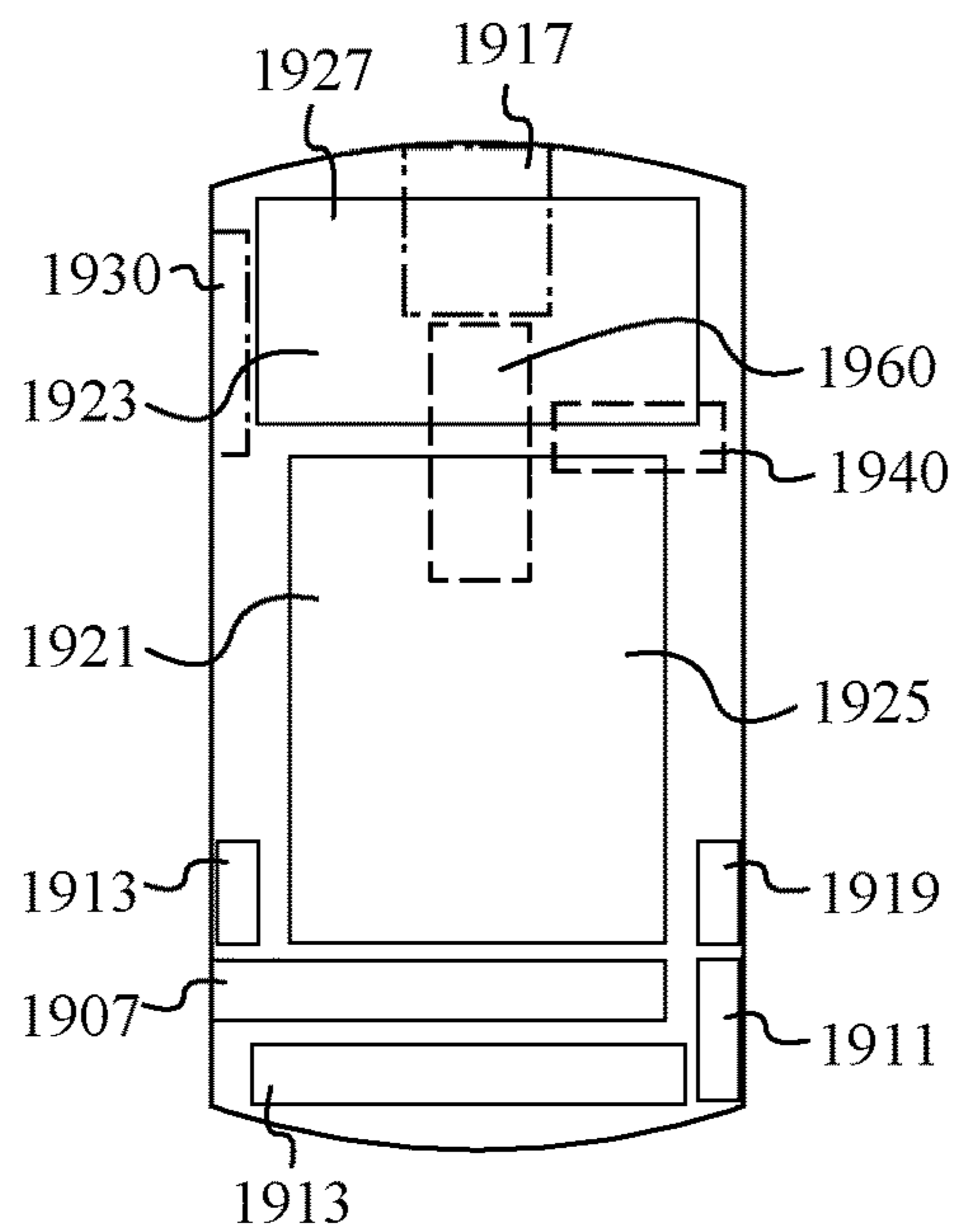
**Fig. 19C**



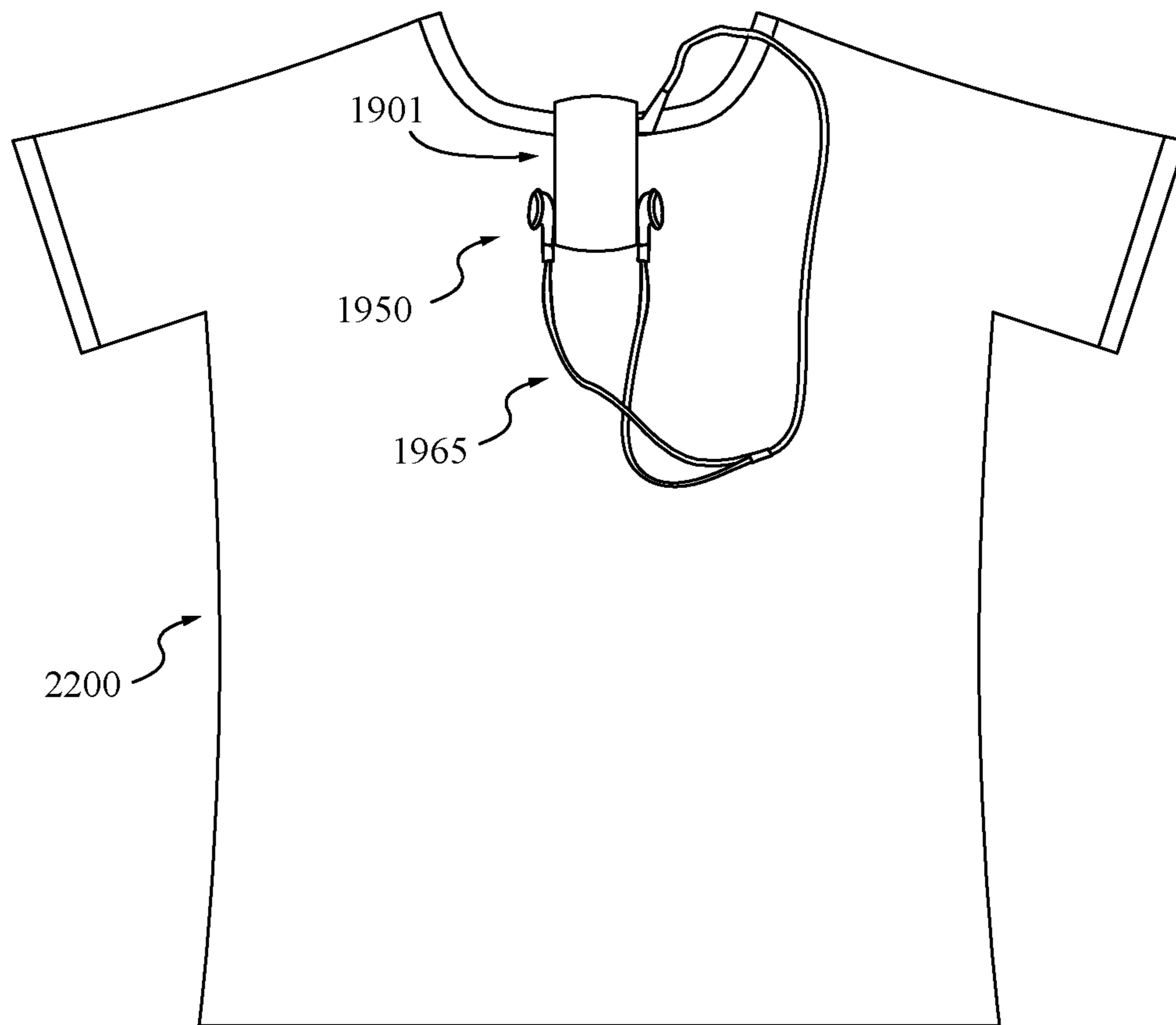
**Fig. 19D**



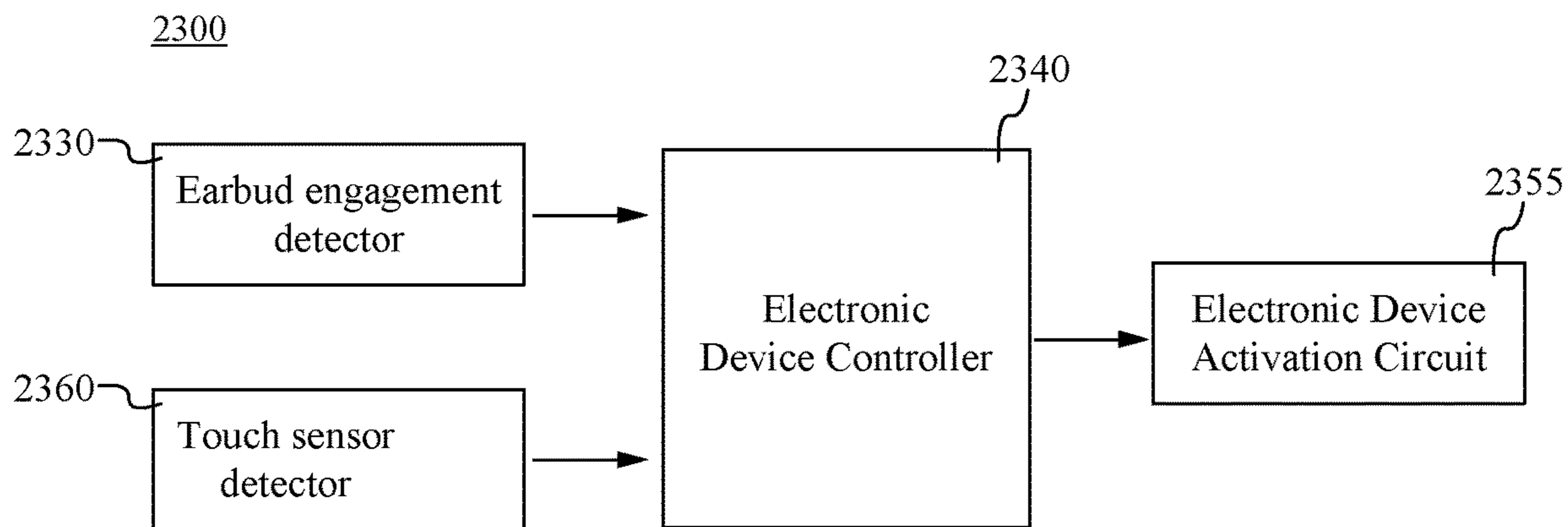
**Fig. 20**



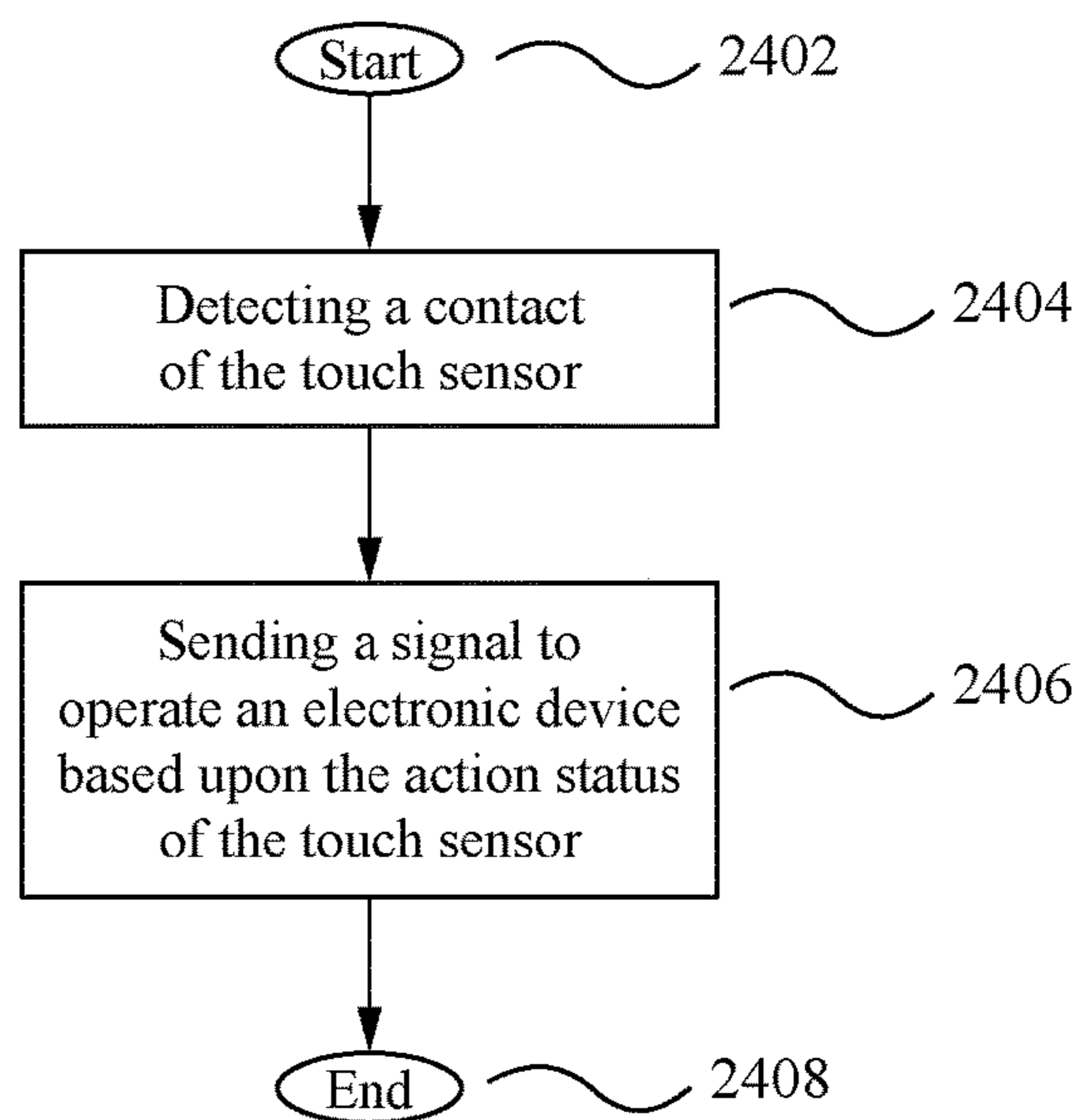
**Fig. 21**



**Fig. 22**



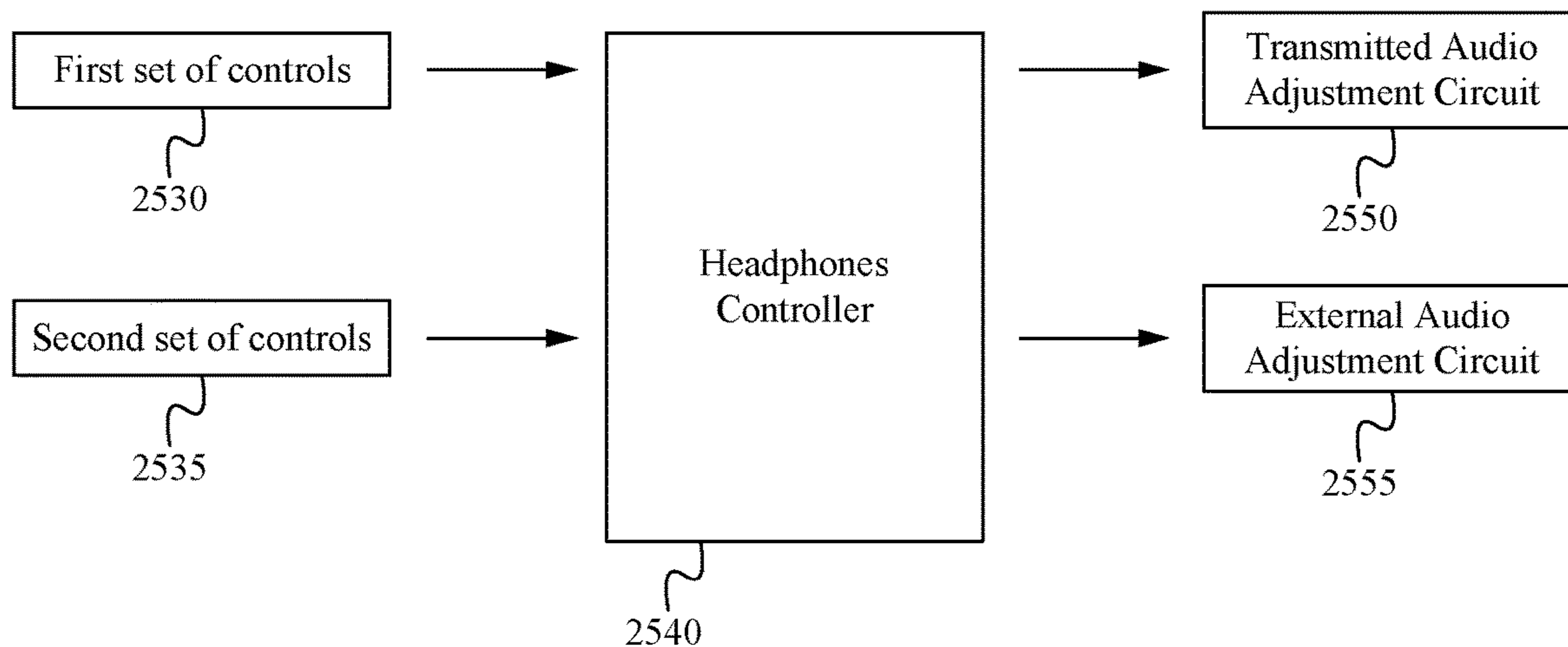
**Fig. 23**



**Fig. 24**

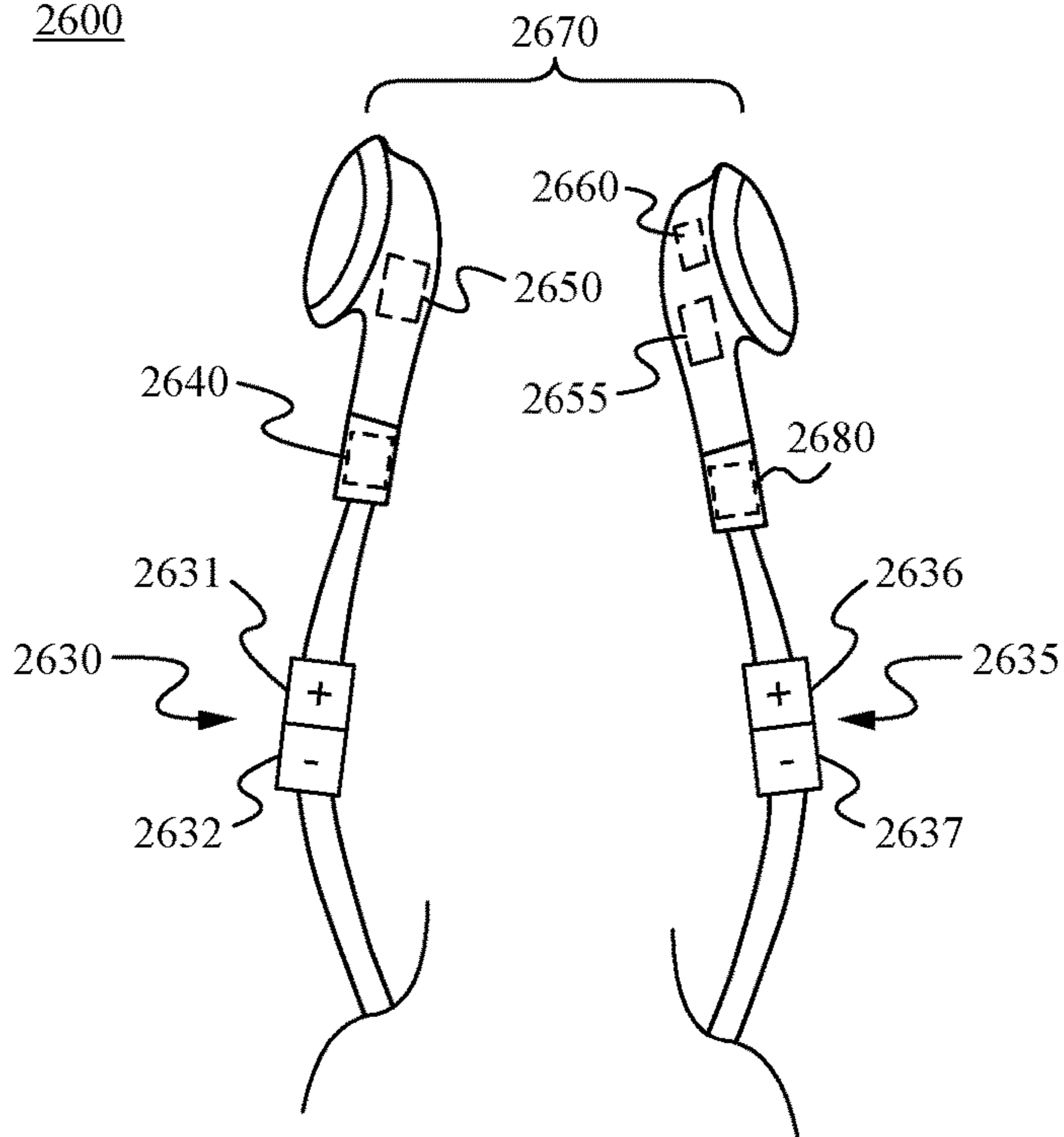


2500

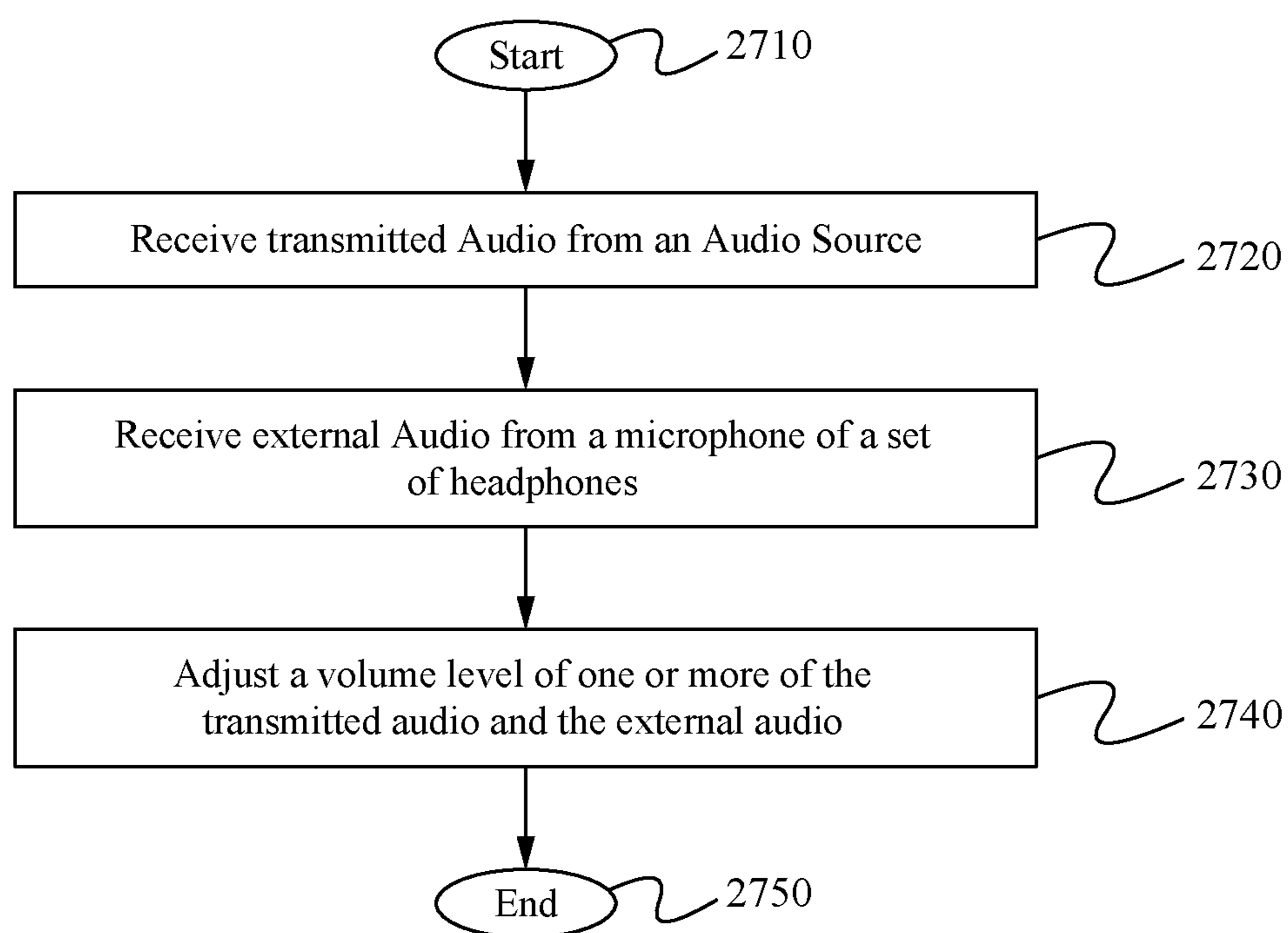


**Fig. 25**

2600



**Fig. 26**

**Fig. 27**



**MAGNETIC EARPHONES HOLDER**

## RELATED APPLICATIONS

This Patent Application is a continuation of the co-pending U.S. patent application Ser. No. 14/215,833, filed Mar. 17, 2014, and entitled "MAGNETIC EARPHONES HOLDER", which is hereby incorporated by reference in its entirety, which is a continuation-in-part of the co-pending U.S. patent application Ser. No. 13/734,871 filed Jan. 4, 2013, and entitled "HEADSET CORD HOLDER", which is hereby incorporated by reference in its entirety, which claims priority under 35 U.S.C. 119(e) to the U.S. provisional patent application, Application No. 61/601,722, filed on Feb. 22, 2012, and entitled "MAGNETIC EARPHONES HOLDER," the U.S. provisional patent application, Application No. 61/671,572, filed on Jul. 13, 2012, and entitled "MAGNETIC EARPHONES HOLDER," and the U.S. provisional patent application, Application No. 61/712,136, filed on Oct. 10, 2012, and entitled "MAGNETIC EARPHONES HOLDER." The U.S. provisional patent application, Application No. 61/601,722, filed on Feb. 22, 2012, and entitled "MAGNETIC EARPHONES HOLDER," the U.S. provisional patent application, Application No. 61/671,572, filed on Jul. 13, 2012, and entitled "MAGNETIC EARPHONES HOLDER," and the U.S. provisional patent application, Application No. 61/712,136, filed on Oct. 10, 2012, and entitled "MAGNETIC EARPHONES HOLDER" are all also hereby incorporated by reference.

## FIELD OF THE INVENTION

The present invention relates to earphone holders. More particularly, the present invention relates to a magnetic earphone holder used to hold a set of earphones.

## BACKGROUND OF THE INVENTION

Headset cords transmit signals from a source device, such as a music player or cell phone, to earphones being worn by a user. Although these cords are typically flexible and can be maneuvered out of the way by the user, such manipulation by the user can be inconvenient, and often inefficient, as the cords regularly find their way back into an undesired location. Additionally, if not secured when not being used the earphones often hang loose in an undesired and inconvenient location where they may be snagged or become tangled. Further, earphones are often moved back and forth from the ears of a user where they are transmitting a signal from the source device to the stored position as the user completes tasks and moves around.

## SUMMARY OF THE INVENTION

The present application is directed toward an earphones holder used to affix a headset to clothing and/or other items. Any set of earphones is able to be affixed, including a headset for an iPod, iPhone, or any other similar cell phone or MP3 or music player. The earphones holder comprises a magnet which removably couples with a magnetically attractable portion of a set of earphones or an added magnet feature built into or onto the earbud or cord or any feature of the earbud or cord. The magnet is able to be designed into or molded into a variety of items, including the handle of a zipper, a buckle, and an item that can be sewn to, pinned to, or clipped to clothing, bags and other items. In some embodiments, the earphones holder body further comprises

an electronic device controller which controls the operation of an electronic device. The controller is configured to send a signal to an electronic device activation circuit which activates the electronic device when the earphones are decoupled from the one or more magnetically attractable surfaces of the earphones holder body and deactivates the electronic device when the earphones are coupled with the one or more magnetically attractable surfaces of the earphones holder body. In further embodiments, the electronic device controller which controls the operation of an electronic device. Particularly, the controller is configured to send a signal to an electronic device activation circuit which operates the electronic in a manner dependent upon a signal from the holder body.

A system for holding a set of earphones comprises a holder body, one or more magnetically attractable surfaces attached to the holder body for removably coupling with a set of earphones, a touch sensor, a touch sensor detector and an electronic device controller for controlling an electronic device. In some embodiments, the system wirelessly communicates with the electronic device. In some embodiments, the system further comprising an earbud engagement detector. In some embodiments, the touch sensor detector receives a signal from the touch sensor and sends a signal to the electronic device controller. In some of these embodiments, the touch sensor detector sends a signal to the electronic device controller that the touch sensor has been tapped, double-tapped, or swiped. Particularly, the electronic device controller sends a signal to an electronic device to operate the electronic device based upon the signal from the touch sensor detector. In some embodiments, the touch sensor detector sends a signal to the electronic device to activate or deactivate the electronic device.

In one aspect, an audio system comprises a set of headphones, a headphones controller, a first set of controls for controlling a volume of transmitted audio played by the headphones, and a second set of controls for controlling a volume of external audio played by the headphones. In some embodiments, the first set of controls and the second set of controls comprise touch screen controls. In further embodiments, the first set of controls and the second set of controls are a component of the headphones. In some embodiments, the first set of controls comprises a first set of buttons and the second set of controls comprises a second set of buttons. In some embodiments, the transmitted audio comprises audio received from an electronic device. The external audio comprises surrounding ambient noise received from an external microphone. In some of these embodiments, the second set of controls control the volume level of ambient noise received through the headphones. In some embodiments, the audio system comprises a noise canceling element.

In another aspect, a set headphones comprises a set of earphones for playing transmitted audio and external audio and a microphone for receiving the external audio. In some embodiments, first set of controls control the volume of transmitted audio played by the headphones and a second set of controls control the volume of external audio played by the headphones. In some embodiments, the first set of controls and the second set of controls comprise touch screen controls. In some embodiments, the first set of controls comprises a first set of buttons and the second set of controls comprises a second set of buttons. In further embodiments, the first set of controls and the second set of controls are a component of the headphones. In some embodiments, the transmitted audio comprises audio received from an electronic device. The external audio



comprises surrounding ambient noise received from the external microphone. In some embodiments, the second set of controls control the level of ambient noise played by the headphones. In some embodiments, the headphones comprise a noise canceling element.

In a further aspect, a method of operating a set of headphones comprises receiving transmitted audio from an electronic device, receiving external audio from a microphone of the headphones, and adjusting a volume level of one of the transmitted audio and the external audio. In some embodiments, a first set of controls control the volume of transmitted audio played by the headphones and a second set of controls control the volume of external audio played by the headphones. In some embodiments, the first set of controls and the second set of controls comprise touch screen controls. In further embodiments, the first set of controls comprises a first set of buttons and the second set of controls comprises a second set of buttons. In some embodiments, the first set of controls and the second set of controls are a component of the headphones.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates an embodiment of an earphones holder having a magnet built into the body of a zipper puller in accordance with the principles of the present invention.

FIGS. 2A-B illustrate an embodiment of an earphones holder having a magnet built into the surface of a plastic shirt snap in accordance with the principles of the present invention.

FIGS. 3A-3D illustrate an embodiment of an earphones holder having a magnet built into a body of an adornment in accordance with some embodiments.

FIG. 4 illustrates an embodiment of an earphones holder having a magnet built into a zipper puller in accordance with some embodiments.

FIGS. 5A and 5B illustrate an embodiment of an earphones holder having a magnet built into a body coupled with a sunglass lanyard in accordance with some embodiments.

FIGS. 5C-5E illustrate an embodiment of an earphones holder having a magnet built into a body coupled with a pair of sunglasses in accordance with some embodiments.

FIGS. 5F and 5G illustrate an embodiment of an earphones holder having a magnet built into a body of a pair of sunglasses in accordance with some embodiments.

FIGS. 6A and 6B illustrate an embodiment of an earphones holder having a magnet built onto the front face of a side squeeze buckle used on bags and packs in accordance with the principles of the present invention.

FIGS. 6C and 6D illustrate an embodiment of an earphones holder having a magnet built into a releasable clip coupled to a sports helmet in accordance with some embodiments.

FIGS. 7A and 7B illustrate an embodiment of an earphones holder having a magnet built into a body in accordance with some embodiments.

FIGS. 8A and 8B illustrate an embodiment of an earphones holder having a magnet built into a piece of jewelry in accordance with some embodiments.

FIG. 9 illustrates an embodiment of an earphones holder having a magnet built into an identifying surface in accordance with some embodiments.

FIG. 10A illustrates an embodiment of an earphones holder having a magnet and a groove built into a zipper puller in accordance with some embodiments.

FIG. 10B shows a close-up view of a magnetically attractable surface for removably coupling with a pair of earphones in accordance with some embodiments.

FIG. 11 illustrates a magnetic earphones and cord holding system in accordance with some embodiments.

FIGS. 12A and 12B illustrate a magnetic earphones and cord holding system in accordance with some embodiments.

FIG. 13 illustrates a schematic view showing the components of a magnetic earphones and cord holding system in accordance with some embodiments.

FIG. 14 illustrates a method of activating and/or deactivating an electronic device in accordance with some embodiments.

FIG. 15 illustrates a magnetic earphones holding system in accordance with some embodiments.

FIG. 16 illustrates a magnetic earphones holding system in accordance with some embodiments.

FIG. 17 illustrates a magnetic earphones holding system in accordance with some embodiments.

FIG. 18 illustrates a magnetic earphones holding system in accordance with some embodiments.

FIGS. 19A-19E illustrate a magnetic earphones holding system in accordance with some embodiments.

FIG. 20 illustrates a magnetic earphones holding system in accordance with some embodiments.

FIG. 21 illustrates a block diagram of a magnetic earphones holding system in accordance with some embodiments.

FIG. 22 illustrates a magnetic earphones holding system in accordance with some embodiments.

FIG. 23 illustrates a schematic view showing the components of a magnetic earphones and cord holding system in accordance with some embodiments.

FIG. 24 illustrates a method of activating and/or deactivating an electronic device in accordance with some embodiments.

FIG. 25 illustrates a schematic view of an audio system in accordance with some embodiments.

FIG. 26 illustrates a set of headphones in accordance with some embodiments.

FIG. 27 illustrates a method of operating a set of headphones in accordance with some embodiments.

#### DETAILED DESCRIPTION OF THE INVENTION

The description below concerns several embodiments of the invention. The discussion references the illustrated preferred embodiment. However, the scope of the present invention is not limited to either the illustrated embodiment, nor is it limited to those discussed, to the contrary, the scope should be interpreted as broadly as possible based on the language of the Claims section of this document.

This disclosure provides several embodiments of the present invention. It is contemplated that any features from any embodiment can be combined with any features from any other embodiment. In this fashion, hybrid configurations of the illustrated embodiments are well within the scope of the present invention.

Referring now to FIG. 1, a first embodiment of an earphones holder 100 is depicted therein. The earphones holder 100 comprises a magnet 110 embedded or molded into a body 115 of a zipper puller 150. The zipper puller 150 is configured to be coupled to a bag or an item of clothing, such as a jacket or shirt. In some embodiments, the body 115 is configured to act as a closure mechanism capable of releasably coupling a first portion of the bag or item of



clothing to a second portion of the bag or article of clothing. For example, in some embodiments, the body **115** comprises a channel (not shown) formed in opposing sidewalls in order to receive and releasably couple together zipper tracks of the bag or item of clothing. In some embodiments, a puller **140** is coupled to the body **115** in order to facilitate the translation of the body **115** along the portions of the bag or item of clothing to which it is attached.

The magnet **110** is molded or otherwise built into the body **115**. In some embodiments, the magnet **110** is encased or embedded within a plastic over mold which surrounds the puller **140**. In some embodiments, one or more additional magnets are coupled with the body **115**. The magnet **110** is configured to receive and releasably secure a set of earphones **175**. As shown in FIG. 1, in some embodiments, the magnet **110** removably couples with the magnetically attractable parts of an earbud of the earphones **175**. In some embodiments, the earphones **175** and/or the cord **165** comprises a magnet or magnetically attractable surface, which removably couples with the magnet **110**. The earphones holder **100** holds a set of earphones **175** connected to the user's Ipod or other electronic device.

FIGS. 2A-B illustrate an embodiment of an earphones holder **200** with a magnet molded into the surface of a plastic or metal snap fastener in accordance with further embodiments. It is contemplated that the snap fastener is capable of being used on a shirt **260**, as shown in FIG. 2B, or on another item of clothing or a bag.

The shirt snap comprises a male snap **235** and a female snap **245** that are configured to releasably couple to one another. For example, in some embodiments, the male snap **235** comprises a stud **240** that is configured to fit securely into an aperture in the female snap **245**. The perimeter of the aperture is defined by the inner circumference of the socket lip **250** and the base **255** of the female snap **245**. In some embodiments, the socket lip **250** extends farther towards the aperture than the base **255**, and the end of the stud **240** has a larger diameter than the base of the stud **240**. In this configuration, the end of the stud **240**, when inserted into the aperture, snaps into place, and is secured from accidental removal by the socket lip **250**.

The shirt snap comprises a magnet **210**. In some embodiments, the magnet **210** is embedded within the male snap **235** or the female snap **235**. In other embodiments, the magnet **210** is a distinct component that is attached to the male snap **235** or the female snap **245**. For example, FIG. 2A shows an exploded view of the headset holder **200** with the magnet **210** separated from the male snap **235**. The magnet **210** comprises a body **215** that fits securely into an aperture in the male snap **235**. In some embodiments, the magnet **210** (as a part of the snap fastener) is configured to act as a closure mechanism capable of releasably coupling a first portion of an item of clothing or a bag to a second portion of the article of clothing or bag.

The magnet **210** is molded or otherwise built into the body **215**. The magnet **210** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **210** removably couples with the magnetically attractable parts of the earphones **275** (FIG. 2B). In some embodiments, the earphones **275** and/or the cord **265** comprises a magnet or magnetically attractable surface, which removably couples with the magnet **210**. FIG. 2B shows the headset holder **200** in use as a shirt snap fastener on a user's shirt **260**. The earphones holder **200** holds a set of earphones **275** connected to the user's Ipod **270**.

FIGS. 3A-D illustrate earphone holders **300** and **305** having a magnet **310** molded into an adornment in accor-

dance with some embodiments. In some embodiments, the adornment is an ornamental accessory having an aesthetic characteristic unrelated to its functional structure, such as the star shape in FIGS. 3A-B and the moon shape in FIGS. 3C-D. The buttons and zippers shown in the previous figures would not constitute an adornment since they do not have an aesthetic characteristic that is unrelated to their functional structure. However, if they were modified to have a certain aesthetic shape that was completely unrelated to their functionality, then they could be considered an adornment.

The adornment comprises a body **315** that is configured to be releasably secured to a bag or an article of clothing, such as shirt **360**. In some embodiments, the body **315** comprises a pin **335** extending from its base. The pin **335** is configured to penetrate the bag or item of clothing. In some embodiments, one or more flanges **340** are disposed proximate the end of the pin **335** to facilitate the attachment of the adornment to the bag or article of clothing. In some embodiments, a clasp **345** having releases **350** is provided along with the adornment in order to provide a secure attachment of the adornment to the bag or article of clothing.

The magnet **310** is molded or otherwise built into the body **315**. The magnet **310** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **310** removably couples with the magnetically attractable parts of the earphones **375** (FIG. 3B). In some embodiments, the earphones **375** and/or the cord **365** comprises a magnet or magnetically attractable surface, which removably couples with the magnet **310**. FIG. 3A shows the headset holder **300** attached to a user's shirt **360**. The earphones holder **300** holds a set of earphones **375** connected to the user's Ipod **370**.

Although FIG. 3D illustrates the body using a pin for attachment, it is contemplated that the body can employ other means for releasably securing itself to a bag or an article of clothing. For example, in some embodiments the body utilizes a magnetic attachment in accordance with the principles of the present invention.

FIG. 4 illustrates an embodiment of an earphones holder **400** having a magnet molded into a body configured to be coupled to a zipper head in accordance with further embodiments.

As shown in FIG. 4, the body **415** is coupled to the zipper head **450**. The earphones holder **400** comprises a puller **440** which is coupled to the body **415**. As shown in FIG. 4, in some embodiments, the puller **440** is a cord which passes through the center of the body **415**. In some embodiments the puller **440** is a cord which couples the body **415** with an opening **480**. In some embodiments the body **415** comprises one or more of wood, glass, and metal.

The body **415** comprises a magnet **410**. In some embodiments, the magnet **410** is embedded within the body **415**. In other embodiments, the magnet **410** is a distinct component that is attached to the body **415**. As shown within FIG. 4, the magnet **410** is molded or otherwise built into the body **415**. The magnet **410** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **410** removably couples with the magnetically attractable parts of the earphones **475**. In some embodiments, as shown in FIG. 4, the earphones **475** also comprise a magnet or magnetically attractable surface **425**, which removably couples with the magnet **410**. In these embodiments, the magnet or magnetically attractable surface **425** is able to be a component of the earphones **475** or the headset cord **465**. In some embodiments, the magnet or magnetically attractable surface **425** is slidable along the earphones **475** or the headset cord **465**. However, as will be apparent to



someone of ordinary skill in the art, the magnet or magnetically attractable surface **425** is able to be fixedly or removably connected to the earphones **475** or the headset cord **465**. As also shown in FIG. **4**, in some embodiments, the earphones holder **400** comprises one or more additional magnets **410'**. In some embodiments, a user is able to removably couple each side of the headset cord **465** or the earphones **475** with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord **465** or earphones **475** with only one of the magnets.

FIGS. **5A-5E** illustrate an earphone holder **500** in accordance with further embodiments. As shown in FIGS. **5A** and **5B**, in some embodiments, the earphone holder **500** comprises a body **515** having a magnet **510** molded into it. The body **515** is configured to be coupled to a lanyard for sun or prescription glasses. In some embodiments, the lanyard **570** passes through an opening **580** within the body **515**. However, the body **515** is able to couple with the lanyard through a clip or any other mechanism as known in the art. As shown in FIGS. **5A** and **5B**, each side of the lanyard comprises a body **515** of a headset cord holder **500**. However, in some embodiments, the earphone holder **500** is only coupled to one side of the lanyard **570**. In some embodiments, the body **515** of the earphone holder **500** comprises one or more of molded plastic, hard plastic, foam and rubber. In some embodiments, the body **510** of the headset cord holder comprises one or more of wood, glass, and metal.

As shown in FIGS. **5C-5E**, in some embodiments, the body **515'** and the body **515''** is configured to be removably coupled with a glasses frame **501**. In some embodiments, an opening **580** within the body **515'** and the body **515''** is slid onto an ear piece **503** of the glasses frame **501**. Accordingly, a user is able to slide the body **515'** and the body **515''** until a desired configuration along the ear piece **503** is found. As will be apparent to someone of ordinary skill in the art, the body **515'** and the body **515''** is able to couple with the glasses frame **501** by any mechanism as known in the art. For example, in some embodiments, the body **515'** and the body **515''** couples with the glasses frame **501** by one or more of a hook and loop fastening system and a clip. The glasses frame **501** is able to comprise sun and prescription glasses or a combination of the two. In some embodiments, the body **515'** and the body **515''** of the earphones holder comprises one or more of molded plastic, hard plastic, foam and rubber. In some embodiments, the body **515'** and the body **515''** of the earphones holder comprises one or more of wood, glass, and metal.

As shown in FIG. **5D**, in some embodiments, the magnet **510** is oriented vertically along the body **515'**. Alternatively, as shown within FIG. **5E**, in some embodiments, the magnet **510** is oriented horizontally along the body **515''**. In some embodiments, the body **515'** and **515''** comprises one or more additional magnets **510'**.

FIGS. **5F** and **5G** show an earphone holder comprising a body and a magnet within the body that directly receives and releasably secures a headset cord. In some embodiments, the magnet **510** is built into the glasses frame **501**.

As shown within FIGS. **5F** and **5G**, in some embodiments the magnet **510** is built into the top of an ear piece **503** of the glasses frame **501**. Alternatively, in some embodiments, as shown in FIGS. **5F** and **5G**, in some embodiments, the magnet **510** is built into a side of the earpiece **503** of the glasses frame **501**. In some embodiments, the magnet **510** is oriented vertically along the ear piece **503**. Alternatively, in some embodiments, the magnet **510** is oriented horizontally along the ear piece **503**. Particularly, the magnet **510** is able

to be located at any position along the ear piece **503**. In some embodiments, the glasses frame **501** comprises one or more additional magnets.

As further shown within FIGS. **5A-5G**, the magnets are configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **510** removably couples with the magnetically attractable parts of the earphones **575**. In some embodiments, as shown in FIG. **5G**, the earphones **575** also comprises a magnet or magnetically attractable surface **525**, which removably couples with the magnet **510**. In these embodiments, the magnet or magnetically attractable surface **525** is able to be a component of the earphones **575** or the headset cord **565**. In some embodiments, the magnet or magnetically attractable surface **525** is slidable along the earphones **575** or the headset cord **565**. However, as will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface **525** is able to be fixedly connected to the earphones **575** or the headset cord **565**. In some embodiments, a user is able to removably couple each side of the headset cord **565** or the earphones **575** with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord **565** or earphones **575** with only one of the magnets.

FIGS. **6A-B** illustrate one embodiment of an earphones holder **600** having a magnet molded onto the front face of a side squeeze buckle used on bags and packs in accordance with some embodiments. FIGS. **6A** and **6B** show a plan view and a side view of the cord holder **600**, respectively.

The side squeeze buckle comprises a female buckle end **615** coupled to a buckle strap or webbing **640** and a male buckle end **635** coupled to a buckle strap or webbing **645**. The female buckle end **615** is configured to receive and releasably hold the male buckle end **635**. In some embodiments, either the female buckle end **615** or the male buckle end **635** comprises a magnet **610**. In some embodiments, the magnet **610** protrudes from either the female buckle end **615**, as seen in FIGS. **6A** and **6B**, or the male buckle end **635**. In some embodiments, the magnet **610** does not protrude from the rest of the buckle end, but rather is flush with the rest of the buckle end. Additionally, in some embodiments, the magnet **610** is integrally formed with the buckle end, while in other embodiments, the body is a separate component that is attached to the buckle end. In some embodiments, the earphones holder **600** is configured to act as a closure mechanism capable of releasably coupling a first strap, and any item to which the first strap is attached, to a second strap, and any item to which the second strap is attached. For example, in some embodiments, the magnet is part of a female buckle end **615** that is coupled to a first portion of a bag via a strap **640**. The female buckle end **615** mates with a male buckle end **635**. The male buckle end **635** is coupled to a second portion of the bag via a strap **645**.

The magnet **610** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **610** removably couples with the magnetically attractable parts of the earphones. In some embodiments, the earphones also comprise a magnet or magnetically attractable surface, which removably couples with the magnet **610**. In these embodiments, the magnet or magnetically attractable surface is able to be a component of the earphones or the headset cord. In some embodiments, the magnet or magnetically attractable surface is slidable along the earphones or the headset cord. However, as will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface is able to be fixedly connected to the earphones or the headset cord. In some embodiments, the



earphones holder **600** comprises one or more additional magnets. In some embodiments, a user is able to removably couple each side of the headset cord or the earphones with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord or earphones with only one of the magnets.

FIGS. **6C** and **6D** illustrate a headset cord holder **600** in accordance with yet further embodiments. As shown in FIGS. **6C** and **6D**, the headset cord holder **600** comprises a body having a magnet **610** molded into the front face of a releasable clip or side squeeze buckle as described in relation to FIGS. **6A** and **6B**. The releasable clip is configured to be attached to a sports helmet.

Each end of the releasable clip **615**, **635** is coupled by a strap **645**, **640** to a sports helmet. As shown in FIG. **6D**, the releasable clip is coupled to a bicycle helmet **660**. However, the releasable clip is able to be coupled to any sports helmet as known in the art. For example, in some embodiments the releasable clip is coupled to one or more of a skiing helmet, bicycle helmet, motorcycle helmet or other sports helmet.

A magnet **610** is built or otherwise embedded within the releasable clip. The magnet **610** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **610** removably couples with the magnetically attractable parts of the earphones. In some embodiments, the earphones also comprises a magnet or magnetically attractable surface, which removably couples with the magnet **610**. The magnet **610** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **610** removably couples with the magnetically attractable parts of the earphones. In some embodiments, the earphones also comprise a magnet or magnetically attractable surface, which removably couples with the magnet **610**. In these embodiments, the magnet or magnetically attractable surface is able to be a component of the earphones or the headset cord. In some embodiments, the magnet or magnetically attractable surface is slidable along the earphones or the headset cord. However, as will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface is able to be fixedly connected to the earphones or the headset cord. In some embodiments, the earphones holder **600** comprises one or more additional magnets. In some embodiments, a user is able removably couple each side of the headset cord or the earphones with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord or earphones with only one of the magnets.

FIGS. **7A** and **7B** illustrate a headset cord holder **700** in accordance with further embodiments.

As shown in FIGS. **7A** and **7B**, a body **715** comprising a magnet **710** is coupled to a sternum strap **720** of a backpack **705**. In some embodiments, the magnet **710** is coupled to an arm strap of a backpack **705**. However, the body **715** is able to couple to any portion of the backpack **705** as known in the art. In some embodiments, the body **715** removably couples with the sternum strap **715** of the backpack **705**. In some embodiments, the body **715** removably couples with the sternum strap **715** by one or more of a hook and loop fastening system and snaps. However, the body **715** is able to removably couple with the backpack **705** by any mechanism as known in the art. In some embodiments, the body **715** is able to additionally couple with one or more of a lumbar pack, a sports bag, and an arm band.

As shown within FIGS. **7A** and **7B**, the magnet **710** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **710** removably couples with the magnetically attractable parts of the ear-

phones. In some embodiments, the earphones also comprises a magnet or magnetically attractable surface, which removably couples with the magnet **710**. In these embodiments, the magnet or magnetically attractable surface is able to be a component of the earphones or the headset cord. In some embodiments, the magnet or magnetically attractable surface is slidable along the earphones or the headset cord. However, as will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface is able to be fixedly connected to the earphones or the headset cord. In some embodiments, the earphones holder **700** comprises one or more additional magnets. In some embodiments, a user is able removably couple each side of the headset cord or the earphones with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord or earphones with only one of the magnets.

FIGS. **8A** and **8B** illustrate an earphones holder **800** in accordance with some embodiments. The headset cord holder **800** comprises a body **815** having a magnet **810** molded or built into the body which is a portion of a piece of jewelry **870**.

In some embodiments, the portion of jewelry is configured to be coupled to at least an additional article. For example, as shown in FIGS. **8A** and **8B**, the body **815** comprises a bead of jewelry **860** in a strand of beads comprising a necklace **870**. In some embodiments, the piece of jewelry is one or more of a broach, earrings, bracelet or sunglass lanyard. However, the body is able to be molded or built into any piece of jewelry as known in the art. Alternatively, in some embodiments one or more additional magnets are able to be molded in to the body or other portion of the piece of jewelry.

As shown within FIGS. **8A** and **8B**, the magnet **810** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **810** removably couples with the magnetically attractable parts of the earphones. In some embodiments, the earphones also comprises a magnet or magnetically attractable surface, which removably couples with the magnet **810**. In these embodiments, the magnet or magnetically attractable surface is able to be a component of the earphones or the headset cord. In some embodiments, the magnet or magnetically attractable surface is slidable along the earphones or the headset cord. However, as will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface is able to be fixedly connected to the earphones or the headset cord. In some embodiments, the earphones holder **800** comprises one or more additional magnets. In some embodiments, a user is able to removably couple each side of the headset cord or the earphones with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord or earphones with only one of the magnets.

As described above, in FIGS. **8A** and **8B**, the body **815** comprises a bead of jewelry **860** in a strand of beads comprising a necklace **870**. In some embodiments, the piece of jewelry is one or more of a broach, earrings, bracelet or sunglass lanyard. However, the body is able to be molded or built into any piece of jewelry as known in the art. Alternatively, in some embodiments one or more additional magnets is able to be molded in to the body or other portion of the piece of jewelry.

FIG. **9** illustrates an embodiment of an earphones holder having a magnet built into an identifying surface in accordance with some embodiments.



## 11

The earphones holder **900** comprises a body **901** having a magnet **910** molded or built into the body **901** which is a portion of an identifying surface **960**. The body **901** is configured to be coupled to at least an additional article. In some embodiments, the body **901** comprises one or more of rubber, plastic and metal. The body **901** is configured to attach to an additional article by one or more of stitching, riveting, heat pressing, adhesive attachment, or chemical method. In some embodiments, the body **901** comprises an additional surface **915** which attaches to the additional article.

The magnet **910** is configured to receive and releasably secure a set of earphones. In some embodiments, the magnet **910** removably couples with the magnetically attractable parts of the earphones. In some embodiments, the earphones also comprises a magnet or magnetically attractable surface, which removably couples with the magnet **910**. In these embodiments, the magnet or magnetically attractable surface is able to be a component of the earphones or the headset cord. In some embodiments, the magnet or magnetically attractable surface is slidable along the earphones or the headset cord. However, as will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface is able to be fixedly connected to the earphones or the headset cord. In some embodiments, the earphones holder **900** comprises one or more additional magnets. In some embodiments, a user is able to removably couple each side of the headset cord or the earphones with a corresponding magnet. Alternatively, in some embodiments, a user is able to couple both sides of the headset cord or earphones with only one of the magnets.

As described above, the body **901** comprises a portion of an identifying surface **960** and is configured to be coupled to an additional article. Particularly, the identifying surface is able to be coupled to an appropriate article as known in the art. For example, in some embodiments the identifying surface **960** is coupled to a bag or an item of clothing. Alternatively, in some embodiments, the identifying surface **960** is coupled to an accessory item such as a key chain or armband. In some embodiments one or more additional magnets is able to be molded into the body **901** or other portion of the identifying surface **960**.

As further shown in FIG. 9, a groove **920** is molded or otherwise built into the body **901**. The groove **920** is configured to receive and releasably secure a headset cord. In some embodiments, the groove **920** is defined by a groove wall **930** that surrounds most of the groove **920**, leaving only an entry space **935** through which the cord can access the groove **920**. In some embodiments, the entry space **935** has a smaller diameter than the groove **920** and the cord, thereby securing the cord within the confines of the groove wall **930** and requiring a significant amount of force for its removal. In some embodiments, portions of the groove wall **930** are flexible so that as the cord is pushed through the entry space **935**, the cord is able to force the groove wall **930** out of its way and temporarily increase the diameter of the entry space **935** so that the cord can pass through the entry space **930** into the groove **920**. In some embodiments, the groove wall **930** is substantially rigid, thereby forcing the outer sleeve of the cord to constrict as it passes through the entry space **935** between the ends of the groove wall **930**.

By incorporating a magnet and a groove into the surface of the body **901** a user is able to releasably secure a headset cord in the groove **920** while utilizing the earphones and then magnetically secure the earphones to the body **901** when not in use.

## 12

FIG. 10A illustrates an embodiment of an earphones holder having a magnet and a groove built into a zipper puller in accordance with some embodiments.

As shown in FIG. 10A, the body **1001** is coupled to the zipper head **1050**. The earphones holder **1000** comprises a puller **1040** which is coupled to the body **1001**. In some embodiments, the puller **1040** is a cord which passes through the center of the body **1001**. In some embodiments, the puller **1040** is a cord which couples the body **1001** with an opening **1080**. In some embodiments, the body **1001** comprises one or more of wood, glass, and metal.

The body **1001** comprises a magnet **1010**. In some embodiments, the magnet **1010** is embedded within the body **1001**. In other embodiments, the magnet **1010** is a distinct component that is attached to the body **1001**. As shown within FIG. 10A, the magnet **1010** is molded or otherwise built into the body **1001**. The magnet **1010** is configured to receive and releasably secure a set of earphones **1075**. In some embodiments, the magnet **1010** removably couples with the magnetically attractable parts of the earphones **1075**. In some embodiments, as shown in FIG. 10A, the earphones **1075** comprise a magnet or magnetically attractable surface **1085** coupled to the earphones, which affixes the earbud to the magnet **1010** built into or embedded within the body **1001**. In these embodiments, the magnet or magnetically attractable surface **1085** is able to be a component of the earphones **1075** or the headset cord **1065**. In some embodiments, the magnet or magnetically attractable surface **1085** snaps or removably couples around the earphones **1075**. In some embodiments, the magnet or magnetically attractable surface **1085** is slidable along the earphones **1075** or the headset cord **1065**. As will be apparent to someone of ordinary skill in the art, the magnet or magnetically attractable surface **1085** is able to be fixedly or removably connected to the earphones **1075** or the headset cord **1065**.

As also shown in FIG. 10A, a groove **1020** is molded or otherwise built into the body **1001**. The groove **1020** is configured to receive and releasably secure the headset cord **1065**. In some embodiments, the groove **1020** is defined by a groove wall **1030** that surrounds most of the groove **1020**, leaving only an entry space through which the cord **1065** can access the groove **1020**. In some embodiments, the entry space has a smaller diameter than the groove **1020** and the cord **1065**, thereby securing the cord within the confines of the groove wall **1030** and requiring a significant amount of force for its removal. In some embodiments, portions of the groove wall **1030** are flexible so that as the cord is pushed through the entry space, the cord is able to force the groove wall **1030** out of its way and temporarily increase the diameter of the entry space so that the cord can pass through the entry space into the groove **1020**. In some embodiments, the groove wall **1030** is substantially rigid, thereby forcing the outer sleeve of the cord to constrict as it passes through the entry space between the ends of the groove wall **1030**.

FIG. 10B shows a close-up view of the magnetically attractable surface **1085**, in accordance with some embodiments. The magnetically attractable surface **1085** removably couples with the earphones **1075** or the headset cord **1065** in order to removably couple the earphones with the magnet **1010** as described above. As shown within FIG. 10B, the magnetically attractable surface **1085** comprises a substantially circular body that fits around the earphones **1075**. In some embodiments, the magnetically attractable surface **1085** is stretchable and stretches to fit over the earphones **1075**. In some embodiments, the magnetically attractable surface **1085** comprises a hinge or coupler **1087** which



enables the magnetically attractable surface **1085** to be opened and coupled around the earphones **1075**. In some embodiments, the magnetically attractable surface **1085** is able to be opened at coupler **1087** and then placed around the earphones **1075** and snap fit back into place. In some 5 embodiments, the magnetically attractable surface **1085** comprises two pieces which are separated in order to removably couple the magnetically attractable surface **1085** with the earphones **1075**. Particularly, the magnetically attractable surface **1085** is able to removably couple with the earphones **1075** by any appropriate mechanism as known in the art. Additionally, although the magnetically attractable surface **1085** is shown with a circular body, the magnetically attractable surface is able to comprise any appropriate shape for coupling with the earphones **1075**.

In some embodiments, a user is able to place the headset cord **1065** within the groove **1020** and then removably couple the magnet or magnetically attractable surface **1085** of the earphones **1075** with the magnet **1010**.

In some embodiments, a shape of the one or more magnets as described above is selected from a set comprising a strip, a ball bearing and a disc. In further embodiments, at least one of the one or more magnets comprise one or more of a neodymium magnet and a ceramic magnet.

In operation, a user places a headset cord within the confines of the groove wall while using the headset to listen to an electronic device. This enables a user to comfortably utilize the headset without becoming entangled within the cord. Then, when not listening to the electronic device, a user places a set of earphones near to the magnet in order to allow the earphones to magnetically attract to and be held by the magnet. This enables the user to place the earphones in a convenient location when using the earphones and also when not in use. By doing so, a user is able to safely secure the earphones rather than letting them dangle where they may become entangled or snagged by the user. Consequently, the earphones holder has the advantage of providing an inexpensive and easy way to hold a headset cord in a comfortable and convenient position while utilizing an electronic device. Accordingly, the headset cord holder described herein has numerous advantages.

Referring now to FIG. **11**, an embodiment of a magnetic earphones and cord holding system is depicted therein. The magnetic earphones and cord holding system **1100** comprises an earphones holder body **1101** and a set of earphones **1150**. The set of earphones **1150** transmits a signal from an electronic device **1105** such as an iPod, iPhone, any other similar cellular phone or smart phone, MP3 or music player, movie player, or other electronic device **1105**. As will be apparent to someone of ordinary skill in the art, the set of earphones **1150** is able to transmit a signal from any appropriate electronic device **1105** as known in the art. For example, in some embodiments, the set of earphones **1150** transmits a signal from an electronic media player such as an iPad, smart phone, tablet PC, Mp4 player, or DivX Media format player.

The earphones holder body **1101** comprises a groove **1120** for receiving and releasably securing a headset cord **1165**, one or more magnetically attractable surfaces **1110** for removably coupling with one or more magnets **1185** of the set of earphones **1150**, and an electronic device controller **1140**. In some embodiments, the one or more magnetically attractable surfaces **1110** are magnets. In some of these embodiments, the magnets are neodymium magnets. In further embodiments, the earphones holder body **1101** comprises one or more recesses **1115** for holding an earbud **1175**. In some embodiments, the earbud **1175** is press fit into the

one or more recesses **1115**. In some embodiments, the earphones holder body **1101** comprises a body comprising a zipper puller, a snap fastener, an adornment, a buckle attachment, or an item of jewelry and a magnet built into or embedded within the body. Particularly, the earphones holder body **1101** is able to comprise a cord holder as described in U.S. patent application Ser. No. 12/891,510, filed on Sep. 27, 2010 and/or a earphones holder as described in U.S. Provisional Patent Application No. 61/601,722, filed on Feb. 22, 2012, which are both hereby incorporated by reference. In some embodiments, the set of earphones **1150** is a component of a hands free telephone adapter.

The groove **1120** is molded or otherwise built into the earphones body **1101**. The groove **1120** is configured to receive and releasably secure a headset cord **1165**. In some embodiments, the groove **1120** is defined by a groove wall **1122** that surrounds most of the groove **1120**, leaving only an entry space **1124** through which the cord **1165** can access the groove **1120**. In some embodiments, the entry space **1135** has a smaller diameter than the groove **1120** and the cord **1165**, thereby securing the cord **1165** within the confines of the groove wall **1122** and requiring a significant amount of force for its removal. In some embodiments, portions of the groove wall **1122** are flexible so that as the cord **1165** is pushed through the entry space **1124**, the cord **1165** is able to force the groove wall **1122** out of its way and temporarily increase the diameter of the entry space **1135** so that the cord **1165** can pass through the entry space **1124** into the groove **1120**. In some embodiments, the groove wall **1122** is substantially rigid, thereby forcing the outer sleeve of the cord **1165** to constrict as it passes through the entry space **1124** between the ends of the groove wall **1122**.

By incorporating a magnet and a groove into the surface of the earphones holder body **1101**, a user is able to releasably secure a headset cord **1165** in the groove **1120** while utilizing the earphones **1150** and then magnetically secure the earphones **1150** to the earphones holder body **1101** when not in use. The one or more magnetically attractable surfaces **1110** are able to be fixedly or removably connected to the earphones holder body **1101**.

As described above, the one or more magnetically attractable surfaces **1110** are configured for removably coupling with the one or more magnets **1185** of the earphones **1150**. In some embodiments, when the one or more magnets **1185** are removably coupled with the one or more magnetically attractable surfaces **1110**, the body of the earbud **1175** is placed within the one or more recesses **1115**. In some embodiments, the one or more recesses **1115** and the body of the earbud **1175** comprise interlocking geometry. In these embodiments, the body of the earbud **1175** is press fit or snap fit into the one or more recesses of the earphones holder body **1101**.

The electronic device controller **1140** receives a signal from the earbud engagement detector **1130** and sends a signal to the electronic device activation circuit **1155** based upon the signal received from the earbud engagement detector **1130**. The electronic device activation circuit **1155** operates an electronic device **1105** based upon the signal received from the controller **1140**. In some embodiments, the earbud engagement detector **1130** sends a signal to the controller **1140** that the one or more magnets **1185** and the earbud **1175** have been decoupled from the earphones holder body **1101**. In these embodiments, upon receiving the signal from the earbud engagement detector **1130**, the controller **1140** sends a signal to the electronic device activation circuit **1155** to activate the electronic device **1105**. In some embodi-



15

ments, the earbud engagement detector **1130** sends a signal to the controller **1140** that the one or more magnets **1185** and the earbud **1175** have been coupled with the earphones holder body **1101**. In these embodiments, upon receiving the signal from the earbud engagement detector **1130**, the controller **1140** sends a signal to the electronic device activation circuit **1155** to deactivate the electronic device **1105**.

In further embodiments, the electronic device controller **1140** sends a signal to electronic device activation circuit **1155** to operate the electronic device **1105** in another manner. For example, in some embodiments, upon receiving the signal from the earbud engagement detector **1130**, the controller **1140** sends a signal to the electronic device activation circuit **1155** to adjust the volume of the signal from the electronic device **1105**. Additionally, in some embodiments, the controller **1140** is able to send a signal to the electronic device activation circuit **1155** in order to pause the signal of an application or a program being transmitted by the electronic device **1105**. Particularly, the controller **1140** is able to send any appropriate signal to the electronic device activation circuit **1155** in order to operate the electronic device **1105**.

The magnetic earphones and cord holding system **1100** is able to send a signal to activate and/or deactivate an electronic device **1105** such as a cell phone. For example, if the user's phone rings, the user is able to remove the set of earphones **1150** from the earphones holder body **1101** and a signal is sent to answer the phone and connect the call. Likewise, if the user is on a call and the set of earphones **1150** are coupled with the earphones holder body **1101**, a signal is sent to hang up the phone and terminate the call. Similarly, the magnetic earphones and cord holding system **1100** is able to send a signal to start, resume, or stop an electronic device such as an electronic media player or gaming device. For example, if a user needs to interrupt playing a video game, playing music, playing a movie, or other media stream, the user is able to couple the set of earphones **1150** with the holder body **1101** in order to pause the electronic device **1105**. Then, when the user desires to resume using the electronic device **1105**, the user is able to decouple the earphones **1150** from the holder body and send a signal and unpauses the electronic device **1105**. In this manner, the user is able to use the magnetic earphones and cord holding system **1100** to operate, activate and/or deactivate any programs or applications that are running on the electronic device **1105**.

In some embodiments, the signal sent by the electronic device controller **1140** to the electronic device activation circuit **1155** and the signal sent by the electronic device activation circuit **1155** to the electronic device **1105** comprise one or more of infrared, infrared laser, radio frequency, wireless, WiFi, and Bluetooth®. However, the signal sent by the electronic device controller **1140** and the electronic device activation circuit **1155** are able to comprise any wireless signal as known in the art. Alternatively, in some embodiments, the signal sent by the electronic device controller **1140** and the electronic device activation circuit **1155** comprise a wired signal.

FIGS. **12A** and **12B** illustrate a side view of a magnetic earphones and cord holding system formed in two parts. The magnetic earphones and cord holding system **1200** comprises a first body **1201** and a second body **1202**. The first body **1201** is substantially similar to the earphones holder body **1101** as discussed in relation to FIG. **11** and comprises a groove (not shown) for receiving and releasably securing a headset cord, one or more magnetically attractable surfaces **1110**, an earbud engagement detector (not shown), and an

16

electronic device controller (not shown). As shown in FIGS. **12A** and **12B**, the first body **1201** comprises a coupling mechanism **1203** and the second body **1202** comprises a coupling mechanism **1205**. The coupling mechanisms **1203** and **1205** enable the first body **1201** and the second body **1202** to couple together. In some embodiments, the coupling mechanisms **1203** and **1205** comprises a snap, a button, or a hook and loop fastening system. However, the coupling mechanisms **1203** and **1205** are able to comprise any appropriate coupling mechanisms as known in the art. In some embodiments, the second body **1202** comprises a button, a snap, a zipper, or an adornment.

FIG. **13** illustrates a schematic view showing the components of a magnetic earphones and cord holding system in accordance with some embodiments. As shown in FIG. **13**, the magnetic earphones and cord holding system **1300** comprises an earbud engagement detector **1330**, an electronic device controller **1340**, and an electronic device activation circuit **1355**. As described above, the earbud engagement detector **1330** detects an engagement of the earbud **1175** (FIG. **11**) with the one or more magnets **1110**. The earbud engagement detector **1330** sends a signal to the electronic device controller **1340** based upon the engagement status of the earbud. The electronic device controller **1340** processes the signal it receives from the earbud engagement detector **1330** and sends a signal to the electronic device activation circuit **1355** which operates an electronic device in a manner dependent upon the signal from the electronic device controller **1340**. In some embodiments, the electronic device controller **1340** sends a signal to the electronic device activation circuit **1355** to activate the electronic device. In some embodiments, the electronic device controller **1340** sends a signal to the electronic device activation circuit **1355** to deactivate the electronic device.

FIG. **14** illustrates a method of operating a set of earphones in accordance with some embodiments.

As shown in FIG. **14**, at the step **1404** an engagement status of an earbud is detected. In some embodiments, it is detected whether or not the earbud is coupled with an earphones holder body. Then, based upon the engagement status of the earbud, at the step **1406**, a signal is sent to operate the electronic device. In some embodiments, the signal is one or more of an infrared, infrared laser, radio frequency, wireless, WiFi, and Bluetooth® signal. In some embodiments, the signal is a wired signal. In some embodiments, the signal is a signal to turn off or to turn on the electronic device.

FIG. **15** illustrates a magnetic earphones holding system in accordance with further embodiments. The magnetic earphones holding system **1500** comprises an earphones holder body **1501** and a set of earphones **1550**. The set of earphones **1550** transmits a signal from an electronic device **1505** such as an iPod, iPhone, any other similar cellular phone or smart phone, MP3 or music player, movie player, or other electronic device **1505**. As will be apparent to someone of ordinary skill in the art, the set of earphones **1550** is able to transmit a signal from any appropriate electronic device **1505** as known in the art. For example, in some embodiments, the set of earphones **1550** transmits a signal from an electronic media player such as an iPad, smart phone, tablet PC, Mp4 player, or DivX Media format player.

The earphones holder body **1501** is in the shape of a zipper puller and comprises one or more magnetically attractable surfaces **1510** for removably coupling with one or more magnets **15815** of the set of earphones **1550**, and an electronic device controller **1540**. In some embodiments, the



one or more magnetically attractable surfaces **1510** are magnets. In some of these embodiments, the magnets are neodymium magnets. In some embodiments, the holder body **1501** comprises a plurality of magnetically attractable surfaces **1510**. In some embodiments, the earphones holder body **1501** comprises a body comprising a snap fastener, an adornment, a buckle attachment, or an item of jewelry and a magnet built into or embedded within the body. In some embodiments, the earphones holder body **1501** further comprises a groove as described in relation to FIG. 1. In some embodiments, the set of earphones **1550** is a component of a hands free telephone adapter.

Using the one or more magnet **1585** of the earphones **1550**, a user is able to couple the earphones **1550** with the one or more magnetically attractable surfaces **1510** of the earphones holder body **1501** when not in use. The one or more magnetically attractable surfaces **1510** are able to be fixedly or removably connected to the earphones holder body **1501**. In some embodiments, the holder body **1501** further comprises one or more recesses for interlocking with the earbud **1575**. In these embodiments, the body of the earbud **1575** is press fit or snap fit into the one or more recesses of the earphones holder body **1501**.

As further shown in FIG. 15, the earphones holder body **1501** comprises an electronic device controller **1540** and an earbud engagement detector **1530**. The electronic device controller **1540** receives a signal from the earbud engagement detector **1530** and sends a signal to the electronic device activation circuit **1555** based upon the signal received from the earbud engagement detector **1530**. The electronic device activation circuit **1555** operates an electronic device **1505** based upon the signal received from the controller **1540**. In some embodiments, the earbud engagement detector **1530** sends a signal to the controller **1540** that the one or more magnets **1585** and the earbud **1575** have been decoupled from the earphones holder body **1501**. In these embodiments, upon receiving the signal from the earbud engagement detector **1530**, the controller **1540** sends a signal to the electronic device activation circuit **1555** to activate the electronic device **1505**. In some embodiments, the earbud engagement detector **1530** sends a signal to the controller **1540** that the one or more magnets **1585** and the earbud **1575** have been coupled with the earphones holder body **1501**. In these embodiments, upon receiving the signal from the earbud engagement detector **1530**, the controller **1540** sends a signal to the electronic device activation circuit **1555** to deactivate the electronic device **1505**.

As shown within FIG. 15, the earbud engagement detector **1530** and the electronic device controller **1540** are components of the earphones holder body **1501**. However, as will be apparent to someone of ordinary skill in the art, one or more of the earbud engagement detector **1530** and the electronic device controller **1540** are able to be components of the set of earphones **1550**.

As shown within FIG. 16, in some embodiments, the one or more magnets **1685** comprise a magnetically attractable surface that is a circular body that fits around the earphones **1650**. In some embodiments, the one or more magnets **1685** removably couple with the earphones **1650**. In some of these embodiments, the magnetically attractable surface **1685** is stretchable and stretches to fit over the earphones **1650**. In some embodiments, the magnetically attractable surface **1685** comprises a hinge or coupler which enables the magnetically attractable surface **1685** to be opened and coupled around the earphones **1650**. In some embodiments, the magnetically attractable surface **1685** is able to be opened at coupler and then placed around the earphones

**1650** and snap fit back into place. In some embodiments, the magnetically attractable surface **1685** comprises two pieces which are separated in order to removably couple the magnetically attractable surface **1685** with the earphones **1650**. Particularly, the magnetically attractable surface **1685** is able to removably couple with the earphones **1650** by any appropriate mechanism as known in the art. Additionally, although the magnetically attractable surface **1685** is shown with a circular body, the magnetically attractable surface is able to comprise any appropriate shape for coupling with the earphones **1650**. As further shown in FIG. 16, the earbud engagement detector **1630** and the electronic device controller **1640** are components of the earphones **1650**.

In further embodiments, the earbud engagement detector **1730** (FIG. 17) is a component of an earbud **1775** and sends a signal to a electronic device controller **1740** incorporated into a separate body **1701**.

FIG. 17 illustrates a magnetic earphones holding system in accordance with further embodiments. The magnetic earphones holding system **1700** comprises an earphones holder body **1701** and a set of earphones **1750**. The set of earphones **1750** transmits a signal from an electronic device **1705** such as an iPod, iPhone, any other similar cellular phone or smart phone, MP3 or music player, movie player, or other electronic device **1705**. As will be apparent to someone of ordinary skill in the art, the set of earphones **1750** is able to transmit a signal from any appropriate electronic device **1705** as known in the art. For example, in some embodiments, the set of earphones **1750** transmits a signal from an electronic media player such as an iPad, smart phone, tablet PC, Mp4 player, or DivX Media format player.

As described above, the earphones holder body **1701** is able to be in a shape of a zipper puller, a snap fastener, an adornment, a buckle attachment, or an item of jewelry and a magnet built into or embedded within the body and comprises one or magnetically attractable surfaces **1710** and an electronic device controller **1740**. As shown in FIG. 17, the earphones **1750** comprise one or more magnets **1785** and an earbud engagement detector **1730**. In some embodiments, the electronic device controller **1740** and the earbud engagement detector **1730** are components of the earphone holder body **1701**. Alternatively, in some embodiments, the electronic device controller **1740** and the earbud engagement detector **1730** are components of the set of earphones **1750**.

Using the one or more magnet **1785** of the earphones **1750**, a user is able to couple the earphones **1750** with the one or more magnetically attractable surfaces **1710** of the earphones holder body **1701** when not in use. The one or more magnetically attractable surfaces **1710** are able to be fixedly or removably connected to the earphones holder body **1701**. In some embodiments, the holder body **1701** further comprises one or more recesses for interlocking with the earbud **1775**. In these embodiments, the body of the earbud **1775** is press fit or snap fit into the one or more recesses of the earphones holder body **1701**.

The electronic device controller **1740** receives a signal from the earbud engagement detector **1730** and sends a signal to the electronic device activation circuit **1755** based upon the signal received from the earbud engagement detector **1730**. The electronic device activation circuit **1755** operates an electronic device **1705** based upon the signal received from the controller **1740**. Particularly, the controller **1740** relays the signal from the earbud engagement detector **1730** to the electronic device **1705**. As described



above, in some embodiments the signal received from the controller 1740 is a signal to activate and/or deactivate the electronic device 1705.

In further embodiments, the earphones holder body 1701 comprises an item that is placed on a counter top or other similar item. In some embodiments, the electronic device controller 1740, is able to send a signal to an activation circuit 1755 of an electronic device 1705 that is removably coupled with an external docking station.

In some embodiments, the signal sent by the electronic device controller 1740 to the electronic device activation circuit 1755 and the signal sent by the electronic device activation circuit 1755 to the electronic device 1705 comprise one or more of infrared, infrared laser, radio frequency, wireless, WiFi, and Bluetooth®. However, the signal sent by the electronic device controller 1740 and the electronic device activation circuit 1755 are able to comprise any wireless signal as known in the art. Alternatively, in some embodiments, the signal sent by the electronic device controller 1740 and the electronic device activation circuit 1755 comprise a wired signal.

In further embodiments, the set of earphones 1750 comprise wireless earphones. In these embodiments, the earbud engagement detector 1730 sends a wireless signal to the electronic device controller 1740 based on the engagement status of the earphones and the earphones 1750 receive a wireless content signal from the electronic device 1705.

FIG. 18 illustrates a magnetic earphones holding system in accordance with some embodiments. The system 1800 comprises a set of earphones comprising one or more magnets or magnetically attractable surfaces 1885 built into the earbud 1875 and one or more magnets or magnetically attractable surfaces 1895 built into the earbud 1875'. As shown in FIG. 18, the earbud 1875 comprises an earbud engagement detector 1830 and an electronic device controller 1840 built into the body of the earbud 1875. Although, the earbud engagement detector 1830 and an electronic device controller 1840 built into a signal body of the earbud 1875, as will be apparent to someone of ordinary skill in the art, the earbud engagement detector 1830 and the electronic device controller 1840 are able to be components of different earbuds.

The electronic device controller 1840 receives a signal from the earbud engagement detector 1830 based upon an engagement of the earbud 1875 with the earbud 1875'. In some embodiments, the earbud engagement detector 1830 sends a signal to the controller 1840 that the one or more magnets or magnetically attractable surfaces 1885 have been removed from the one or more magnets or magnetically attractable surfaces 1895. In these embodiments, upon receiving the signal from the earbud engagement detector 1830, the controller 1840 sends a signal to the electronic device activation circuit 1855 to activate the electronic device 1805. In some embodiments, the earbud engagement detector 1830 sends a signal to the controller 1840 that the earbud 1875 has been coupled with the earbud 1875'. In these embodiments, upon receiving the signal from the earbud engagement detector 1830, the controller 1840 sends a signal to the electronic device activation circuit 1855 to deactivate the electronic device 1805.

In operation, the earphones holder enables a user to comfortably utilize a headset without becoming entangled within the cord. In some embodiments, a user uses a groove and the magnets of a cord holder body while using the headset to listen to an electronic device. A user places a set of earphones near to the magnet in order to allow the earphones to magnetically attract to and be held by the

magnet. When the user wishes to use the electronic device, the earphones are removed from the magnet and a signal is transmitted in order to active an electronic device such as a music player or cell phone. Then, when the user no longer wishes to use the electronic device, the earphones are recoupled with the magnet and the electronic device is deactivated. In this manner, the earphones are able to be removed from the earphones holder body and an electronic device is automatically activated in order to answer a telephone call. Then, when the telephone call is terminated, the user is able to recouple the earphones with the earphones holder body and automatically deactivate the device. Alternatively, the earphones are able to be removed from the earphones holder body and an electronic device is automatically activated in order to listen to music transmitted from a music player or cell phone and then recoupled with the earphones holder body in order to deactivate the device when the use of the earphones is no longer desired.

Referring now to FIGS. 19A-19E, an embodiment of a magnetic earphones and cord holding system is depicted therein. The magnetic earphones and cord holding system 1900 comprises a body 1901 comprising a touch sensor 1903, an on/off button 1911, a microphone 1913, a speaker 1915, and a charging port 1917. As shown in FIGS. 19A-19E, the body 1901 also comprises an electronic device controller 1940 and a touch sensor detector 1960. In some embodiments, the system comprises an earphones jack 1907 and one or magnets or magnetically attractable surfaces 1920 and 1920' and one or more earbud engagement detectors 1930 and 1930'. The one or magnets or magnetically attractable surfaces 1920 and 1920' are configured to removably couple with one or more magnets 1985 and 1985' of a set of earphones 1950. In further embodiments, the body 1901 comprises a groove and/or one or more recesses for securing the earphones 1950 and the cord 1965, as described above.

In some embodiments, the electronic device controller 1940 receives a signal from the earbud engagement detector 1930 and sends a signal to the electronic device activation circuit 1955 based upon the signal received from the earbud engagement detector 1930. The electronic device activation circuit 1955 operates an electronic device 1905 based upon the signal received from the controller 1940. In some embodiments, the earbud engagement detector 1930 sends a signal to the controller 1940 that the one or more magnets 1985 and the earbud 1975 have been decoupled from the earphones holder body 1901. In these embodiments, upon receiving the signal from the earbud engagement detector 1930, the controller 1940 sends a signal to the electronic device activation circuit 1955 to activate the electronic device 1905. In some embodiments, the earbud engagement detector 1930 sends a signal to the controller 1940 that the one or more magnets 1985 and the earbud 1975 have been coupled with the earphones holder body 1901. In these embodiments, upon receiving the signal from the earbud engagement detector 1930, the controller 1940 sends a signal to the electronic device activation circuit 1955 to deactivate the electronic device 1905.

In further embodiments, the touch sensor detector 1960 receives a signal from the touch sensor 1903 based upon a contact with the touch sensor 1903 and sends a signal to the electronic device controller 1940, which sends a signal to the electronic device activation circuit 1955. The electronic device activation circuit 1955 operates an electronic device 1905 based upon the signal received from the controller 1940. For example, in some embodiments, the touch sensor detector 1960 sends a signal to the electronic device con-



troller 1940 that the touch sensor 1903 has been tapped, double-tapped, and/or swiped. In response, the electronic device controller 1940 sends a signal to the electronic device activation circuit 1955 to operate the electronic device 1905. In some embodiments, the electronic device controller 1940 is able to send a signal to activate/de-activate the electronic device, turn up or turn down the volume, change the playing media, and/or change the program being operated by the electronic device 1905. Particularly, the electronic device controller 1940 is able to send any appropriate desired control signal to the electronic device 1905. Additionally, the touch sensor 1903 is able to be operated in any desired manner.

In some embodiments, the magnetic and cord holding system 1900 is used with the set of earphones 1950. In these embodiments, the power input 1995 is inserted into the earphones jack 1907 and the one or more magnets 1985 and 1985' are removably coupled with the one or more magnets or magnetically attractable surfaces 1920 and 1920'. In some embodiments, a user is able to remove the earphones 1950 and transmit a signal in order to activate the electronic device 1905, as described above. Then, with the earphones in their ears, a user is able to utilize the touch sensor 1903 in order to operate the electronic device 1905. In some embodiments, the magnetic and cord holding system 1900 is used with a short cord set of earphones. Consequently, the set of earphones is able to be used without becoming entangled in the clothing of the user. Particularly, as shown in FIG. 20, because the power input 1975 and the earphones 1950 are held closely together when coupled with the body 1901, the cord 1965 of the earphones only needs to long enough to comfortably couple the earphones 1950 with the ears of a user and enable the user to use the touch sensor 1903 and/or the microphone 1913 of the body 1901 of the magnetic and cord holding system 1900.

In further embodiments, the magnetic and cord holding system 1900 is able to be used without the set of earphones 1950. For example, the touch sensor 1903 is able to be contacted in order activate the electronic device 1905 and then a user is able to utilize the touch sensor 1903 in order to operate the electronic device 1905. In these embodiments, the touch sensor 1903 is able to be utilized in order to answer a telephone call and communicate using the microphone 1913 and the speaker 1915. Then, when the telephone call is terminated, the user is able to utilize the touch sensor 1903 to terminate the call and deactivate the electronic device 1905. Additionally, in some embodiments, the system 1900 and the touch sensor 1903 are used without audio in order to control a program running on the electronic device 1905.

The magnetic and cord holding system 1900 is able to be used with a variety of electronic devices and in a variety of settings. For example, in some embodiments, the system 1900 is utilized with an electronic device that is coupled with an external docking station. In further embodiments, the system 1900 is able to be used as a controller for a game or program located on the electronic device. In these embodiment the touch sensor 1903 is able to be utilized to send control messages to the electronic device in order to control the game or program. In further embodiments, the system 1900 is able to receive a signal from an electronic device. For example, in some embodiments the system 1900 is able to receive an audio signal from the electronic device through the speaker 1915. Further, in some embodiments, the speaker 1915 and the microphone 1913 are used to communicate voice controls to the electronic device 1905.

In some embodiments, the signal sent by the electronic device controller 1940 to the electronic device activation

circuit 1955 and the signal sent by the electronic device activation circuit 1955 to the electronic device 1905 comprise one or more of infrared, infrared laser, radio frequency, wireless, WiFi, and Bluetooth®. However, the signal sent by the electronic device controller 1940 and the electronic device activation circuit 1955 are able to comprise any wireless signal as known in the art. Alternatively, in some embodiments, the signal sent by the electronic device controller 1940 and the electronic device activation circuit 1955 comprise a wired signal.

FIG. 21 illustrates a block diagram showing the components of the body 1901 of the system 1900. As described above, the body 1901 comprises a touch sensor 1903, an on/off button 1905, a microphone 1913, a speaker 1915, and a charging port 1917. As shown in FIGS. 19A-19E, the body 1901 also comprises an electronic device controller 1940 and a touch sensor detector 1960. In some embodiments, the system comprises an earphones jack 1907 and one or magnets or magnetically attractable surfaces 1920 and 1920' and one or more earbud engagement detectors 1930 and 1930'. In some embodiments, the body 1901 comprises a printed circuit board 1923 and a battery 1925 for supplying power to the system 1900. In some embodiments, the body 1901 further comprises an LED light 1919 for indicating that the body 1901 is powered on. In some embodiments, the earphones jack 1907 is a 3.5 mm jack. However, as will apparent to someone of ordinary skill in the art, the earphones jack 1907 is able to comprises any appropriately sized jack. In some embodiments, the charging port 1917 is a USB port. However, the charging port 1917 is able to comprise any appropriately sized charging port.

FIG. 22 illustrates the magnetic and cord holding system 1900 removably coupled to a shirt collar in accordance with some embodiments. The body 1901 of the system 1900 has been coupled to the shirt 2200 by using the clip 1909, as shown in FIGS. 19A and 19B. When using the clip 1909, a user is able to secure the body 1901 in a convenient, desired location. As will be apparent to someone of ordinary skill in the art, the body 1901 is able to be secured in any appropriate manner as known in the art. For example, in some embodiments, the body 1901 is coupled with a lanyard which is placed around a neck of a user in order to place the body 1901 in a convenient location.

FIG. 23 illustrates a schematic view showing the components of a magnetic earphones and cord holding system in accordance with some embodiments. As shown in FIG. 23, the magnetic earphones and cord holding system 2300 comprises an earbud engagement detector 2330, an electronic device controller 2340, and an electronic device activation circuit 355. As described above, the earbud engagement detector 2330 detects an engagement of an earbud with the one or more magnets of the body as shown in FIGS. 19A-19E. The earbud engagement detector 2330 sends a signal to the electronic device controller 340 based upon the engagement status of the earbud. The electronic device controller 2340 processes the signal it receives from the earbud engagement detector 2330 and sends a signal to the electronic device activation circuit 2355 which operates an electronic device in a manner dependent upon the signal from the electronic device controller 2340. In some embodiments, the electronic device controller 2340 sends a signal to the electronic device activation circuit 2355 to activate the electronic device. In some embodiments, the electronic device controller 2340 sends a signal to the electronic device activation circuit 2355 to deactivate the electronic device.

As further shown in FIG. 23, the magnetic earphones and cord holding system 2300 comprises a touch sensor detector



2360. The touch sensor detector detects a contact of the touch sensor 903 (FIG. 9A) and sends a signal to the electronic device controller 2340 based upon the contact with the touch sensor 903. The electronic device controller 2340 processes the signal it receives from the touch sensor detector 2360 and sends a signal to the electronic device activation circuit 2355 to operate an electronic device in a manner based upon the signal received from the electronic device controller 2340. In some embodiments, the electronic device controller 2340 sends a signal to the electronic device activation circuit 2355 to activate/de-activate the electronic device, turn up or turn down the volume, change the playing media, and/or change the program being operated by the electronic device.

FIG. 24 illustrates a method of operating a magnetic earphones and cord holding system comprising a touch sensor in accordance with some embodiments. In the step 2404, a contact of a touch sensor is detected. For example, in some embodiments it is detected that the touch sensor is tapped, double-tapped, swiped in a sideways direction, and/or swiped in an up and down direction. Then, based upon the contact with the touch sensor, in the step 2406, a signal is sent to operate the electronic device. In some embodiments, the signal is one or more of an infrared, infrared laser, radio frequency, wireless, WiFi, and Bluetooth® signal. In some embodiments, the signal is a wired signal. In some embodiments, the signal is a signal to activate/de-activate the electronic device, turn up or turn down the volume, change the playing media, and/or change the program being operated by the electronic device.

The magnetic earphones and cord holding system enables a user to automatically activate and/or deactivate an electronic device and place the earphones in a convenient location when using the earphones and when not in use. Consequently, the earphones and cord holding system has the advantage of providing an inexpensive and easy way to hold a headset cord in a comfortable and convenient position while utilizing an electronic device. Additionally, the earphones and cord holding system is able to conserve power by ensuring that the electronic device is only activated when needed. Accordingly, the magnetic earphones and cord holding system described herein has numerous advantages.

In another aspect, a set of headphones and audio system comprises a first set of buttons for controlling a volume level of transmitted audio to the headphones and a second set of buttons for controlling a volume level of external audio played by the headphones. The transmitted audio comprises audio received from an audio source such as an electronic device and the external audio comprises surrounding ambient noise received by a microphone coupled to the headphones. With the first set of controls and the second set of controls a user is able to adjust the volume level of the transmitted audio and the volume level of the external audio in order to listen to the transmitted audio while still interacting with the surrounding environment. The set of headphones and audio system is able to be used with the magnetic earphones and cord holding system, such as described above.

Referring now to FIG. 25, a schematic view of an audio system is depicted therein. As shown within FIG. 25, the audio system 2500 comprises a first set of controls 2530, a second set of controls 2535, a headphones controller 2540, a transmitted audio adjustment circuit 2550 and an external audio adjustment circuit 2555. The first set of controls 2530 controls a transmitted audio to a set of headphones. The transmitted audio is transmitted from an electronic device, such as described above, or a similar audio player which

plays audio through the headphones. Particularly, the headphones are able to receive transmitted audio from any appropriate device configured for use with headphones. The second set of controls 2535 controls an external audio received from a microphone coupled to the headphones. Particularly, the second set of controls 2535 is able to adjust a volume of surrounding ambient noise received by the microphone and played through the headphones.

The first set of controls 2530 and the second set of controls 2535 send a signal to the headphones controller 2540. The headphones controller 2540 processes the signals from the first set of controls 2530 and the second set of controls 2535 and sends a signal to one or both of the transmitted audio adjustment circuit 2550 and the external audio adjustment circuit 2555. For example, in some embodiments, the first set of controls 2530 sends a signal to the headphones controller 2540 to adjust a volume of the transmitted audio received through the headphones. The headphones controller 2540 processes the signal from the first set of controls 2530 and sends a signal to the transmitted audio adjustment circuit 2550 to turn up or turn down the volume of the transmitted audio. In some embodiments, the second set of controls 2535 sends a signal to the headphones controller 2540 to adjust a volume of the external audio received by the microphone and played through the headphones. The headphones controller 2540 processes the signal from the second set of controls 2535 and sends a signal to the external audio adjustment circuit 2555 to turn up or turn down the volume of the external audio received by the microphone and played through the headphones.

The first set of controls 2530 and the second set of controls 2535 enable a user to precisely set a volume level of transmitted audio and external audio played through the headphones. For example, a user is able to use the second set of controls 2535 to adjust the level of ambient noise to zero and/or off so that the headphones are isolated from the surrounding ambient noise of the external environment. Alternatively, the second set of controls 2535 may be used to adjust the level of ambient noise to a level where the user is able to have a conversation or clearly hear outside noises while still wearing the headphones. Particularly, the first set of controls 2530 and the second set of controls 2535 are able to adjust the level of transmitted audio and the level of external audio played by the headphones to an acceptable level as desired by the user.

In some embodiments, the audio system 2500 comprises a magnetic earphones and cord holding system, such as described above and the first set of controls 2530 and the second set of controls 2535 comprise touch screen controls of the touch sensor 1903 (FIG. 19). Additionally, in some embodiments, the first set of controls 2530 comprises a first set of buttons and the second set of controls 2535 comprises a second set of buttons. In some embodiments, the first set of controls 2530 and the second set of controls 2535 are a component of the headphones and/or headphones cord. In some embodiments, the headphones comprise a noise canceling element.

FIG. 26 illustrates a set of headphones in accordance with some embodiments. The set of headphones comprises a set of earphones 2670 for playing transmitted audio and external audio received through a microphone 2660. As shown in FIG. 26, the earphones 2670 comprise a set of earbuds designed to be worn within the ears of the user. However, the earphones 2670 are able to comprise over the ear headphones or other design as appropriately desired. As



## 25

described above, in some embodiments, the transmitted audio is received from a electronic or other device transmitting audio.

As further shown in FIG. 26, the headphones 2600 comprise a first set of controls 2630, a second set of controls 2635, a headphones controller 2640, a transmitted audio adjustment circuit 2650 and an external audio adjustment circuit 2655. Although the first set of controls 2630, the second set of controls 2635, the headphones controller 2640, the transmitted audio adjustment circuit 2650 and the external audio adjustment circuit 2655 are shown coupled to separate components of the headphones 2600, the first set of controls 2630, the second set of controls 2635, the headphones controller 2640, the transmitted audio adjustment circuit 2650 and the external audio adjustment circuit 2655 may be coupled together and/or separately as appropriately desired. In some embodiments, the first set of controls 2630, the second set of controls 2635 are touch screen controls used with a magnetic earphones and cord holding system, such as described above.

In some embodiments, the first set of controls 2630 comprises a first button 2631 for raising the volume of the transmitted audio and a second button 2632 for lowering the volume of the transmitted audio. Similarly, the second set of controls 2635 comprises a first button 2636 for raising the volume of the transmitted audio and a second button 2637 for lowering the volume of the external audio received by the microphone 2660 and played through the headphones 2600. In some embodiments, the first set of controls 2630 and the second set of controls 2635 comprise touch screen controls. In some embodiments, the headphones 2600 comprise a noise canceling element 2680.

As described above, the first set of controls 2630 and the second set of controls 2635 send a signal to the headphones controller 2640. The headphones controller 2640 processes the signals from the first set of controls 2630 and the second set of controls 2635 and sends a signal to one or both of the transmitted audio adjustment circuit 2650 and the external audio adjustment circuit 2655. For example, in some embodiments, the first set of controls 2630 sends a signal to the headphones controller 2640 to adjust a volume of the transmitted audio received through the headphones. The headphones controller 2640 processes the signal from the first set of controls 2630 and sends a signal to the transmitted audio adjustment circuit 2650 to turn up or turn down the volume of the transmitted audio. In some embodiments, the second set of controls 2635 sends a signal to the headphones controller 2640 to adjust a volume of the external audio received by the microphone and played through the headphones. The headphones controller 2640 processes the signal from the second set of controls 2635 and sends a signal to the external adjustment circuit 2655 to turn up or turn down the volume of the external audio received by the microphone and played through the headphones.

The first set of controls 2630 and the second set of controls 2635 enable a user to precisely set a volume level of transmitted audio and external audio played through the headphones. For example, a user is able use the second set of controls 2635 to adjust the level of ambient noise to zero and/or off so that the headphones are isolated from the surrounding ambient noise of the external environment. Alternatively, the second set of controls 2635 may be used to adjust the level of ambient noise to a level where the user is able to have a conversation or clearly hear outside noises while still wearing the headphones. Particularly, the first set of controls 2630 and the second set of controls 2635 are able

## 26

to adjust the level of transmitted audio and the level of external audio played by the headphones to an acceptable level as desired by the user.

FIG. 27 illustrates a method of operating a set of headphones in accordance with some embodiments.

The method begins in the step 2710. In the step 2720, audio is received from an electronic device. As described above, the transmitted audio is transmitted from an electronic device, such as described above, or a similar audio player which plays audio through the headphones. In the step 2730, external audio is received from a microphone coupled to the set of headphones. Then, in the step 2740 a volume level of one or more of the transmitted audio and the external audio is adjusted to a level as desired by the user. In some embodiments, a first set of controls and a second set of controls enable a user to precisely set a volume level of transmitted audio and external audio played through the headphones. In some embodiments, the first set of controls and the second set of controls comprise touch screen controls. Alternatively, in some embodiments, the first set of controls comprises a first set of buttons and the second set of controls comprises a second set of buttons. The first set of controls and the second set of controls are able to be coupled to the headphones and/or a magnetic headphones holder as described above. The method ends in the step 2750.

In use the set of headphones comprising a microphone for receiving ambient surrounding noise enables a user to adjust the amount of ambient noise played through the headphones. Using a set of controls the level of ambient noise may be turned all the way off in order to be isolated from surrounding ambient noises while only listening to transmitted music. Alternatively, the ambient noise may be turned to a level that allows the user to interact with the surrounding environment while still wearing the headphones and listening to the transmitted music.

With the headphones, a user is able to go for a bike ride or a run while listening to music while still hearing the surrounding traffic and other ambient noises. Additionally, if a user needs to interact with another person they only need to increase the level of ambient noise in order to hear the other person and carry on a conversation. The headphones enable a user to interact with the surrounding environment without removing the earphones and interrupting the audio experience. Particularly, the user is able to carry out everyday tasks while listening to music or other audio while maintaining contact with surrounding environment and other persons. Accordingly, the set of headphones comprising a microphone for receiving surrounding ambient noise as described herein has many advantages.

The presently claimed invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of the principles of construction and operation of the invention. As such, references herein to specific embodiments and details thereof are not intended to limit the scope of the claims appended hereto. It will be apparent to those skilled in the art that modifications can be made to the embodiments chosen for illustration without departing from the spirit and scope of the invention.

What is claimed is:

1. An audio system comprising:
  - a. a first earphone comprising a first magnet;
  - b. a second earphone comprising a second magnet for removably coupling with the first magnet; and
  - c. a device controller coupled to the first earphone and the second earphone, wherein the device controller receives an activation signal when a decoupling of the



27

first magnet and the second magnet is detected, wherein the activation signal enables audio to be played at the first earphone and the second earphone, further wherein the device controller receives a deactivation signal when the first magnet and the second magnet are again coupled, wherein the deactivation signal enables the audio to be terminated at the first earphone and the second earphone.

2. The audio system of claim 1, further comprising:

- a. a first set of controls for controlling the audio played at the first and the second earphone; and
- b. a second set of controls for controlling external audio played at the first and the second earphone.

3. The audio system of claim 2, wherein the external audio comprises surrounding ambient noise received from a microphone.

4. The audio system of claim 3, wherein the second set of controls control the volume level of ambient noise played by the earphones.

5. The audio system of claim 1, wherein the audio played at the first and the second earphone comprises audio received from an electronic device.

6. The audio system of claim 1, further comprising a noise canceling element.

7. The audio system of claim 1, wherein the activation signal enables an incoming call to an electronic device to be answered and connected and further wherein the audio played at the first and the second earphone comprises audio for the call.

8. The audio system of claim 7, wherein the deactivation signal enables an ongoing call through the electronic device to be terminated.

9. The audio system of claim 1, wherein the activation signal is sent wirelessly.

10. An audio system comprising:

- a. a first earphone comprising a first magnet;
- b. a second earphone comprising a second magnet for removably coupling to the first magnet of the first earphone; and
- c. a device controller coupled to the first earphone and the second earphone, wherein the device controller receives an activation signal when the second magnet is removed and decoupled from the first magnet, wherein the activation signal enables audio to be played at the first earphone and the second earphone, wherein the device controller receives a deactivation signal when the second magnet is again coupled to the first magnet, wherein the deactivation signal enables the audio to be terminated at the first earphone and the second earphone.

11. The audio system of claim 10, further comprising:

- a. a first set of controls for controlling the audio played at the first and the second earphone; and
- b. a second set of controls for controlling external audio played at the first and the second earphone.

12. The audio system of claim 11, wherein the external audio comprises surrounding ambient noise received from a microphone.

13. The audio system of claim 12, wherein the second set of controls control the volume level of ambient noise played by the earphones.

14. The audio system of claim 10, further comprising a noise canceling element.

15. The audio system of claim 10, wherein the activation signal enables an incoming call to an electronic device to be

28

answered and connected and further wherein the audio played at the first and the second earphone comprises audio for the call.

16. The audio system of claim 15, wherein the deactivation signal enables an ongoing call through the electronic device to be terminated.

17. The audio system of claim 10, wherein the activation signal is sent wirelessly.

18. A method of operating an electronic device comprising:

- a. detecting an engagement status of a first magnet of a first earphone with a second magnet of a second earphone;
- b. sending an activation signal to a device controller of the electronic device when the first magnet is removed and decoupled from the second magnet, wherein the activation signal enables audio to be played at the first earphone and the second earphone, the device controller coupled to the first earphone and the second earphone; and
- c. sending a deactivation signal to the device controller of the electronic device when the first magnet is again coupled to the second magnet, wherein the deactivation signal enables the audio to be terminated at the first earphone and the second earphone.

19. The method of claim 18, further comprising:

- a. operating the electronic device based upon the engagement status of the first magnet with the second magnet; and
- b. receiving transmitted the audio from the electronic device.

20. The method of claim 18, further comprising:

- a. receiving external audio from a microphone; and
- b. adjusting a volume level in the first earphone and the second earphone of one of the audio played at the first and the second earphone and the external audio.

21. The method of claim 20, wherein the external audio comprises surround ambient noise received from a microphone.

22. The method of claim 18, further comprising canceling outside noise from being played by the first earphone and the second earphone.

23. The method of claim 18, wherein the activation signal enables an incoming call to an electronic device to be answered and connected and further wherein the audio played at the first and the second earphone comprises audio for the call.

24. The method of claim 23, wherein the deactivation signal enables an ongoing call through the electronic device to be terminated.

25. The method of claim 18, wherein the activation signal is sent wirelessly.

26. A method of operating an electronic device comprising:

- a. detecting an engagement status of a first magnet of a first earphone with a second magnet of a second earphone;
- b. sending an activation signal to a device controller of the electronic device when the first magnet is removed and decoupled from the second magnet, wherein the activation signal enables audio to be played at the first earphone and the second earphone, wherein the device controller is coupled to the first earphone and the second earphone;
- c. sending a deactivation signal to the device controller of the electronic device when the first magnet is again coupled to the second magnet, wherein the deactivation



29

- signal enables the audio to be terminated at the first earphone and the second earphone; and
- d. operating the device based upon the engagement status of the first earphone with the second earphone.
27. The method of claim 26, further comprising:
- a. operating the device based upon the engagement status of the first magnet with the second magnet; and
- b. receiving the audio from the electronic device.
28. The method of claim 26, further comprising:
- a. receiving external audio from a microphone; and
- b. adjusting a volume level in the first earphone and the second earphone of one of the audio played at the first earphone and the second earphone and the external audio.
29. The method of claim 28, wherein the external audio comprises surround ambient noise received from a microphone.
30. The method of claim 26, further comprising canceling outside noise from being played by the first earphone and the second earphone.
31. The method of claim 26, wherein the activation signal enables an incoming call to an electronic device to be answered and connected and further wherein the audio played at the first earphone and the second earphone comprises audio for the call.
32. The method of claim 31, wherein the deactivation signal enables an ongoing call through the electronic device to be terminated.
33. The method of claim 26, wherein the activation signal is sent wirelessly.
34. An audio system comprising:
- a. a set of headphones comprising:
- i. a first headphone comprising a first magnet;
- ii. a second headphone comprising a second magnet for removably coupling with the first magnet; and
- iii. a headphones controller coupled to the first headphone and the second headphone, wherein the headphones controller receives an activation signal when a decoupling of the first magnet and the second magnet is detected, wherein the activation signal enables one or more of transmitted audio and external audio to be played at the first headphone and the second headphone;
- b. a first set of controls for controlling a volume of the transmitted audio played through the headphones; and
- c. a second set of controls for separately controlling a volume of the external audio played through the headphones.
35. The audio system of claim 34, wherein the headphones controller, the first set of controls and the second set of controls are a component of the headphones.
36. The audio system of claim 34, wherein the first set of controls comprises a first set of buttons and the second set of controls comprises a second set of buttons.

30

37. The audio system of claim 34, wherein the audio played at the first headphone and the second headphone comprises audio received from an electronic device.
38. The audio system of claim 34, wherein the external audio comprises surrounding ambient noise.
39. The audio system of claim 38, wherein the ambient noise is received from a microphone.
40. The audio system of claim 38, wherein the second set of controls control the volume level of ambient noise received through the headphones.
41. The audio system of claim 34, wherein the audio system comprises a noise canceling element.
42. A set of headphones comprising:
- a. a first earphone comprising a first magnet and a first set of controls at the first earphone;
- b. a second earphone comprising a second magnet for removably coupling with the first magnet and a second set of controls at the second earphone;
- c. a device controller coupled to the first earphone and the second earphone, wherein the device controller receives an activation signal when a decoupling of the first magnet and the second magnet is detected, wherein the activation signal enables one or more of transmitted audio and external audio to be played at the first earphone and the second earphone;
- d. the first set of controls sends a signal to a transmitted audio adjustment circuit of the first earphone for controlling a volume of the transmitted audio played through the headphones; and
- e. the second set of controls sends a signal to an external audio adjustment circuit of the second earphone for separately controlling a volume of the external audio played through the headphones.
43. The set of headphones of claim 42, wherein the first set of controls comprises a first set of buttons and the second set of controls comprises a second set of buttons.
44. The set of headphones of claim 42, wherein the first set of controls and the second set of controls are a component of the headphones.
45. The set of headphones of claim 42, wherein the external audio comprises surrounding ambient noise.
46. The set of headphones of claim 45, wherein the ambient noise is received from a microphone.
47. The set of headphones of claim 42, wherein the headphones comprise a noise canceling element.
48. The audio system of claim 34, further wherein the headphones controller receives a deactivation signal when the first magnet and the second magnet are again coupled, wherein the deactivation signal enables the audio to be terminated at the first headphone and the second headphone.
49. The set of headphones of claim 42, further wherein the device controller receives a deactivation signal when the first magnet and the second magnet are again coupled, wherein the deactivation signal enables the audio to be terminated at the first earphone and the second earphone.

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